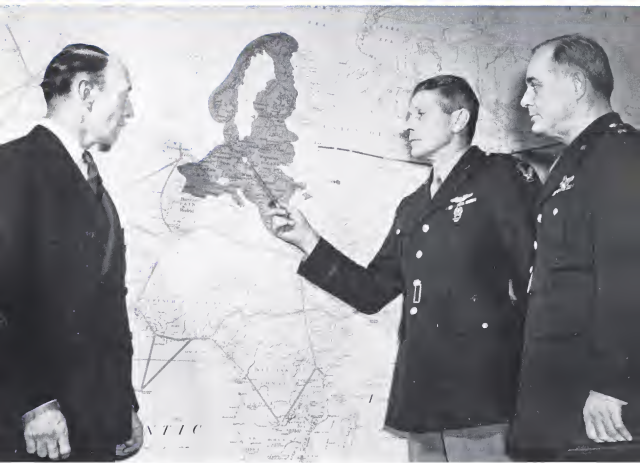


# Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

MARCH 13, 1944



**AAF Strikes at Nazis' Heart:** *Rapidly changing requirements of the swiftly paced global war topped by American daylight raid on Berlin occupy Robert Lovett, Assistant Secretary of War for Air, left, and Maj. Gen. Oliver P. Echols, Assistant Chief of Air Staff in charge of materiel, maintenance and distribution, at Dayton for conferences with Maj. Gen. Charles E. Branshaw, Materiel Command Chief, center.*

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Lack of definite manufacturing division and failure to name demobilization director for work seen leaving industry out on post-war limb....Page 12



## PRESS AND THE INSPECTION DOOR FLIES OPEN!

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action faster. Press the trigger of the Hartwell latch and the inspection door flies open! Press the bolt and it is locked shut! It is that easy and that fast! And it is economical!



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## THE AVIATION NEWS

# Washington Observer

**MANPOWER DRAFT**—Hearings are still in progress on the administration-backed National Service Bill, but there is still little, if any, likelihood that it will be approved. The Bill, sweeping for life, got another job from the Truman Committee which does not believe that so drastic a remedy is warranted at this time. On the other hand, Secretary Knox told Congress that the National Service Bill must be passed to prevent a disastrous slump in production after the European phase of the war ends. He contends that only its passage could stimulate production of levels needed to follow the defeat of Germany with the speedy defeat of Japan. Congress remains lukewarm on the subject and besides, this is an election year.

**STRIKE ANTIDOTE**—It appears that the Truman Committee had in mind administration arguments that a National Service Law would be a weapon against strikes when it declared the strikes in raising, manufacturing and construction in 1943 resulted in a loss of manpower of less than one-fourth of 1 percent of the manpower actually used, whereas manpower contributed by labor in that period exceeded that used in 1931 by 76 percent. The Committee called for a clear and understandable government labor relations policy, a recommendation that will quickly result a highly check of

efficiency which is America's war industry.

**SILVER PLANES**—The elimination of exterior paint and camouflage from "Silver Planes" has given them a weight saving of 140 pounds and six to eight miles per hour increase in speed, according to Consolidated Vultee officials. From England comes word that Boeing "Flying Fortresses" have increased their speed up to ten miles an hour, minus their olive drab, thereby shedding some 60 pounds or more of camouflage. This may give an indication, looking post-warward, of the peacetime dress of our transports. It appears logical that the passenger liners of the future will retain their lustrous silver, with as little decorative paint as possible.

**"HAP" TO HAMP**—When one of the newer versions of the *Fog Zero* appeared in the North Pacific skies months ago, Allied airmen gave it the nickname Hap and for some time the plane was thus officially known by Allied airmen, correspondents and various military analysts in this country. Lately, a new word—Hamp—popped up in the military vocabulary, but it turned out to be the same airplane with a new name. Some Pentagon sources have explained that Gen. H. H. (Hap) Arnold was somewhat and understandably embarrassed and "suggested" a change in name.

Liberator, with white undersides to make it inimitable against clouds, at Goose Bay, Labrador.







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Provide remote, automatic control of aircraft flight operations

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- ...for anti-ice temperature control
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- ...for carburetor intake air temperature control
- ...Servo throttle motor
- ...Servo torque motor

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LET'S GO USA!  
KEEP 'EM FLYING!



A type of automatic safety control used in military aircraft. Features lever control for safety control for safety control.



Motorized temperature modulating control for engine intake air temperature. Also used for engine applications requiring close control.



Typical "torque motor" shown above. Some motors are supplied in several types for applications involving additional power requirements. Motor type and mounting often available to meet your specific requirements.

# WHITE-RODGERS ELECTRIC CO.

SAINT LOUIS, MO.

VOLUME 1 - NUMBER 22

# Aviation News

McGraw-Hill Publishing Co., Inc.

March 12, 1944

## U. S. Maps United Nations Talks On Post-War Aviation Program

Conference expected to be held about end of 1944; Senate announces agenda for survey of world aviation outlook.

Two major developments took place last week in the international post-war aviation picture. A high authority disclosed that the United States hopes for a United Nations aviation conference about the end of this year. And a Senate group announced the agenda on which it plans to predetermine an exhaustive survey of the entire international aviation outlook.

This study, which will begin at once, is planned by the Aviation Subcommittee of the Senate Commerce Committee. Chairman Bennett Champ Clark assembled the agenda and made it public.

**Agenda—Study of Clark's agenda and consideration of the status of international exchange regarding preliminary conferences lead to the conclusion that a clear-cut statement of this country's position as the principal problems of post-war aviation is due in the future.**

Information concerning progress to date of the Legislative and Executive branches of the government is forthcoming as a policy is now reasonably complete, however, and indications are that, despite sweeping reluctance heretofore to tackle actively the problems of post-war aviation, a start now is being made aimed at securing United States leadership in international air transportation immediately following the war.

**Goww Named—Joseph C. Goww, former Ambassador to Japan, has been appointed to head the United States representatives in forthcoming exploratory talks looking toward a general United Nations conference.**

It is common knowledge that Britain first proposed a series of exploratory talks with this country some months back. The question of participation by other interested powers naturally arose.

and we now are at the point where arrangements for conversations among the United States, Britain, Russia, Canada and possibly China are said authoritatively to be in a fairly advanced stage. Persons who should know, however, declare that exploratory talks are in prospect for this month.

**Conversations Planned—The most definite statement that can be made now is that bilateral conversations between the United States and other countries named will be held as soon as possible. It is expected that, following talks with these**

powers, the United States may invite European, Latin-American and other British Commonwealth countries to participate in bilateral conversations.

**Review—The Senate aviation group by that time should be fully informed regarding all phases of post-war international aviation prospects. The Senate Foreign Relations Committee also is beginning a more limited review of steps being taken in the foreign field with respect to aviation, and the possibility has been suggested that Chairman Tom Connally may appoint a subcommittee to work with Clark's committee. Several Senators already hold membership in both committees.**



"FORTRESS" WING INSTALLATION

This unusual photograph shows a Flying Fortress wing, swung beneath an overhead traveling crane, being lowered toward mating with the fuselage. Where fittings are aligned, they will be locked in place by tapered pins such as that in the mechanism's left hand. Wing position servomechanisms are machined from "6240" steel, heat treated to safe tensile loads of approximately 170,000 pounds.

Clark's agenda was topped by this statement:

"The issue at this time is to determine what steps are best calculated to permit the United States to retain leadership in international air transportation which it had attained before the war and to which its resources entitle it and to extend American activity in this field as one of the most important influences in the preservation of peace."

◆ **Issue Divided**—Clark divided the issue into international and national phases. The international phase deals generally with sovereignty of the air and its possible relaxation as well as with methods of obtaining operating rights in foreign countries. The national phase has to do with organization of our external services and the question of standing lines' desire to enter the field of aviation.

Clark's view that organization is purely a domestic matter conforms with the State Department attitude. The domestic instrument question along with the citizenship question is not to be discussed in international conversations. The matter is regarded as one within the exclusive jurisdiction of Congress.

◆ **Reassured**—Clark said the agenda represented a return of sanity after the present ground executive sessions the Committee has been holding for several months. The State Department and the Civil Aeronautics Board have been represented periodically at these sessions, so it is natural to assume their views are present in the questions raised. Clark said these "assurances" have



#### LIVESTOCK PAVILION CONVERTED TO PROP PLANT

Shaw rings and other stells at the Milwaukee Fair Grounds, near St. Paul, have been repaired with rolling machines, cranes and jacks for production of propeller blades by A. O. Smith Co., of Milwaukee. Seven parts of the propeller assembly are being turned out in this converted plant. The plant was used to A. O. Smith's Milwaukee plant for steel assembly. More than \$4,500,000 was spent in remodeling buildings.

been put before the Committee:

◆ **Abandonment of sovereignty of the air in favor of either freedom of the air, defined as freedom to engage in any type commercial operation, or sovereignty except possibly cabotage, or freedom of innocent passage.**

◆ **Abandonment of the present system of obtaining franchises by application of American carriers to foreign governments in favor of obtaining such rights by the government through executive agreements.** Clark reported a suggestion had been made that the system of obtaining unilateral franchises as "recommended and cannot be practiced in the future because all countries will demand equal rights."

Clark's statement raised all manner of considerations in connection with these "suggestions." The Committee, he said, will need reassurances concerning national security, competition with cheap labor countries, the possibility of entry routes establishing corporations under laws of neutral European, Latin-American or Asiatic countries, subsidy costs, "the possibility that 'freedom of the air' would lead to subsidy wars and international friction," likelihood that foreign countries will demand reciprocity as a matter of national prestige and dilution of American traffic.

Regarding organization for external services, Clark's agenda raises three questions on the issue of competition: the possibility that one company would be played off against another, the need of con-

sideration of American effort against foreign competition, extent to which foreign competition may provide necessary incentive to progress, national defense considerations, the "problem of subsidizing two or more American companies to compete against each other."

#### P & W Produces 250,000,000 hp.

United Aircraft Division and its licensee supply power for 125,000 fighters, says Paul Harbo.

Pitt & Whitney Aircraft Division of United Aircraft Corp. and its six licensees have produced aircraft engines and spare parts rates at more than 250,000,000 hp. since Pearl Harbor.

The six licensees last year reached full production and together produced more than twice the volume turned out by Pitt & Whitney, although none of them—Ford, Buick, Chevrolet, Nash-Kelvinator, Jacobs and Continental—equals it.

The total horsepower, the company reported, was enough to supply 135,000 single engine combat aircraft of the highest-powered type—Wright Corsairs, Grumman Hellcats or Republic P-47s.

It was disclosed that Pitt & Whitney is changing over to production of larger engines not only with the R-2800-C, the new big double Wasp scheduled for shipment soon, but also with the company's newest and super-powered engine.

The company said that Army and Navy schedules indicate that about 50 percent of the combined horsepower made by American aircraft plants will carry the Pitt & Whitney label.

#### Durand Honored

W. M. Durand, professor emeritus of mechanical engineering of Lehigh University, and an authority on jet propulsion, was honored at a dinner in Washington last week by the National Advisory Committee for Aeronautics.

A book of excerpts of his contributions to science, especially completed by Theodore von Karman, was presented to Professor Durand by Francis B. Jewett, president of the National Academy of Sciences.

Among the guests was Sir Richard Pearce, member of the British Air Mission to the U. S.

#### AAP Experts Check Captured FW-190

Fighter-bomber version found to have electric control operating mechanism.

One of the few airplanes with no hydraulic system, utilizing electric control operating mechanisms to a large extent, is now undergoing tests by the Army Air Forces Materiel Command at Wright Field. The plane is a lighter-bomber version of the Focke-Wulf 190, captured almost intact on an airstrip near Naples and brought to this country for detailed testing.

An automatic moisture control and electrically operated wheels and flaps make possible elimination of the hydraulic system.

◆ **Two Wing Tanks**—As installed by the Nazis for bombing missions, the FW-190 carries two wing tanks with the bomb carried on a rack beneath the fuselage. Two engines are built into the wing roots and are electrically synchronized in fire through the propeller act. The regular fighter version carries four engines and two 738 machine guns.

Officers at the Materiel Command said the modification entailed numerous structural changes and that the version under test, probably built in 1943, weighs approximately 10,000 pounds and has a wing spread of 34.5 feet. It resembles the A-19P in flight, although the wing span is less. It is powered by a BMW 14-cylinder, 2-row radial engine, rated at approximately 1,600 hp. Cooling is aided by a power-driven rotary fan geared to the propeller hub.

#### Retroactive Pay

Boring/Whitby is making payment of \$3,000,000 to employees in the form of full retroactive pay representing a 9.33 percent increase for the period between Oct. 6, 1942, and Aug. 4, 1943.

The payment has been approved by the War Labor Board and payment is being made through the date on which pay increases were authorized.

Chf. Barrow, Boeing assistant secretary-treasurer, said all employees as the company pays out the full Aug. 4 will receive the adjusted pay, including those who have since entered the armed forces.



"Focke-Wulf" Tested at Wright Field. This fighter-bomber version of the Focke-Wulf 190, now undergoing tests at Wright Field, is somewhat comparable to the Army Air Force's A-36 and in the opinion of the Materiel Command "should not be underrated."

#### Truman Cites United Renegotiation Policy

Truman Committee fought to stand against excessive profits on war business.

United Aircraft Corp. was cited by the Truman Committee as an example of a corporation which has "been far-sighted enough to appreciate and encourage a renegotiation policy which will enable American industry to come out of this war not only financially healthy, but morally clean."

The committee said United has taken the attitude that it does not wish to profit exorbitantly from the unprovoked increased volume of war business.

◆ **Refunds Offered**—The result has been, the committee reported, that the executives of that company have come to the Price Adjustment Board periodically every few months and have submitted the figures of their operations for the few months immediately preceding, together with an offer of a voluntary refund of such part of their profits as were deemed excessive.

Refunds made in this manner by United during 1941, 1942 and 1943 were reported as aggregating more than \$25,000,000 and after making these refunds, they still had left after taxes in 1942, \$17,600,000 of net profits, which was a little more than three times their average net profits of \$5,600,000 per year during their base period.

◆ **Comment**—The committee then said: "But, with all the far-sight-

edness and willingness to cooperate of the management of United Aircraft and other companies who have taken the sane, cooperative and patriotic attitude toward war costs and war profits it cannot be doubted that such corporations would be forced to change their attitude—[that] such corporations would be forced to keep profits as low as they knew and agreed were excessive—if they did not know their less broadminded and more self-seeking competitors would be forced to make refunds upon a somewhat comparable basis. No corporate executive could afford to make a voluntary refund of \$25,000,000 to the government if he knew that his competitor would be permitted to keep comparable profits with which to run him when real competition is restored at the end of the war."

#### Wright's Original Promoter Dies

Clifford Elwood Peterlin, original promoter of the \$4,666,000 Wright Co., died last week. Peterlin averaged the financing when he was only 25 years old, having spent 10 years with J. P. Morgan & Co.

In October, 1899, he convinced Wilbur Wright he could arrange financial backing of the company that has now become Wright Aeronautical Corp. Within a month the company was formed and Peterlin served briefly as a member of the board. He has not been active in the aviation industry recently.

## Glider Pilots Test New Models At Base Near Wright Field

Motorless planes with tricycle landing gear and foreign models put through paces at experimental laboratory; hospital pickup type among craft developed.

By ALEXANDER M'GURELY

At a little-known Army field, expert glider pilots and engineers of the Materiel Command are experimenting with some of the newest ideas in military gliders.

Chillicothe County Army Air Field at Wilkesboro, Ohio, about 80 miles north of Dayton, is a subsection of Wright Field, Materiel Command headquarters. It was opened last July, after it became apparent that Wright Field was too crowded with powered aircraft to make it suitable for extensive glider tests.

**New Toolies**—Under direct control of the Materiel Command's glider branch of the aircraft laboratory at Wright Field, the CCAAF is a scene of continuing tests and studies, trying out new uses for gliders, and new tactics, as well as putting new types through their paces.

Most spectacular of the gliders there are the giant YCG-13-A, a few of which now have added a rear wheel and become a tricycle-geared glider, and the British Hamilcar glider of comparable size. But, of course, there are quantities of the best-known CG-4A in vari-

ous modifications. It was this 16-place glider, together with the British Hamilcar, which played an important role in the Sicilian invasion.

**Hospital Evacuation Model**—Among various modifications of the 16-place glider, is a hospital evacuation glider, designed for landing in some 600 small for hospital planes to land. The craft is fitted with removable tanks, providing six stretcher places or four seats.

By using the Army glider pickup system, a development of All American Aviation's small pickup device, the evacuation glider can be "parked" out of a very small area, after it has been loaded with wounded. It permits evacuation of wounded from areas difficult to reach by motor ambulance or any other means.

## Giles Replaces Royce

Brig Gen Benjamin Giles has succeeded Maj Gen. Ralph Royce as commanding general of all U. S. forces in the Middle East. General Giles formerly commanded the 9th Air Force Troop Carrier Command.



**Glider Branch Chief:** Lieut. Col. Bruce B. Price, who heads the glider unit at Wright Field, climbs out of cockpit of YCG-13-A. Price shows credit for AAF glider development mostly with the late Rick and C. duPont, the late Maj. Lewis Berringer, Col. Frederick Dent, Price's predecessor as branch chief, now overseas, and C. Francis Archer, chief engineer of Waco Aircraft, who designed the YCG-13, and its sister and smaller sisters, the 15-place CG-4A and the eight-place CG-3.



**First Military Glider With Tricycle Landing Gear:** Shown above is the Army's big YCG-13 cargo glider, at the Clinton County, Ohio, Army air field south of Dayton. The new rear wheel makes this the first

Army military glider with a tricycle landing gear. Pilot in foreground is Capt. Douglas Swetlow, veteran member pilot of the Almatian campaign, now testing gliders at Wright Field.

## WEST COAST REPORT

## WPB Scans Plane Aluminum Need; May Reopen Major Plants

Release of surplus product for other war needs studied; manufacture of lightweight landing mats for airfields proposed as aid to speedy establishment of ports in invaded areas.

By SCHOLER BANGS

Within two months War Production Board members should know to the split ton how much aluminum the aircraft industry will need to meet war orders. From that vital information, now being supplied by aircraft manufacturers, WPB will determine whether to continue shutdown orders issued several major aluminum plants at the first of the year, or to reopen them and add to a backlog already far above war needs.

There also will be a decision as to whether aluminum will be released to other war uses—lightweight carriages for the artillery of invasion forces, light deck supports on aircraft carriers, frames for military trucks, and buses badly needed to carry war workers in to labor shortage areas.

**Estimates Gathered**—Currently gathering aluminum estimates from Southern California aircraft plants are J. A. Krug, program vice-chairman and director of the Office of War Utilities, WPB and C. E. W. Haveling, AAF, administrator of WPB's Aircraft Scheduling Unit, which has as other members Col. W. S. Case, for the British Government, and Capt. C. H. Griffin, USN. Colored Newlands also is chief, Resources Control Section, Production Division, Materiel Command at Wright Field.

While in Los Angeles, Krug will be heard removed manufacturing reports on efforts to develop aluminum landing mats for airplanes flown by transport planes from ships to advance wilderness air bases, they would speed development of air supply lines.

**Things To Consider**—Reneville G. Walker, president, and C. N. Kimball, vice-president and executive engineer, of Aircraft Associates Corp., which showed January net sales of \$4,224,322 in production of radio equipment in Kansas City and hydraulic equipment in Bunkham, Calif., are optimistic over "post-war" because they have a new brake valve for motor buses,

a hydraulic hose that will prevent hydraulic brake failure on highway vehicles, a positive hydraulic diesel throttle control, an air brake for aircraft landing gear, and a variety of radio and electronic projects, including a blind flight screen on which the pilot will see the terrain ahead. Plans for the latter have been submitted to West Coast factories planning to build large post-war airplanes. Kimball is convinced that blind landings soon will be wholly automatic, electronically controlled.

**Women**—Aluminum hands faced with the task of deciding the extent to which they should campaign for women workers to meet rising production demands should find a degree of guidance in facts furnished by Aircraft War Production Council, Inc. (West Coast).

Among workers leaving the West Coast industry for all classes in 1943, 56 percent were women. Of that group who quit jobs in any one month, 3.84 percent of the women and 3.43 percent of the men had worked 25 days or less. Of those quitting after working less than 25 days, 4.39 percent were women and 4.46 percent were men. Within three months of starting work, 4.96 percent of the women and 5.45 percent of the men asked for termination certificates. A total of 45.51 percent of women had quit without working a full year while 39.49 percent of the men quit without working a full year.

**Source**—The figures were obtained from reports submitted by Boeing, Consolidated Vultee, Douglas, Lockheed, North American, Northrop and Ryan. At the end of 1943 128,276, or 43.67 percent, of their 292,314 workers were women. During December 1943 31,322 percent of 11,275 persons hired were women. Hiring of women was higher in November—58.94 percent. But the slight dip in the hiring of women apparently is not to be taken as an indication that West Coast plants want fewer



## NEW UAL JIG:

United Air Lines claims a saving of 235 man-hours a year through an improved jig for testing brake-cable tubes. W. E. Bushy, of UAL's central maintenance base at Chetopa, is shown with the new method jig, which he suggested. The apparatus uses four drive belts to draw the portable part of the fixture under the expansion tube. Formerly six men were needed to fit the two together.

women workers. Contrary to an indication that the demand for women would ease off, both AWPIC and the Los Angeles Citrus Manufacturers Association are proclaiming that "Women play a big role in plane plants," and "Aircraft production is becoming more and more a woman's job."

## Commando Schedule Up 250 Percent

Production of C-46 Commando cargo planes is scheduled to increase 250 percent in Buffalo plants of Curtiss-Wright Corp. this year and the plants will continue to produce an improved version of the P-46 fighter throughout 1946, according to Marjette S. Wright, vice-president and general manager of the airplane division.

He also outlined results of the campaign against absenteeism, stating that current absenteeism has been reduced 90 percent from six months ago.

**Discharges Effective**—He said the discharge of a comparatively few employees to show that the Labor-Management Committee means business in this drive has been helpful in effecting our program for complete utilization of workers.

## Aircraft Industry May Lag Behind Other Groups in Reconversion

Lack of definite manufacturing division and failure to appoint demobilization director for work seen as factors tending to leave plane industry out on post-war limb.

Reconversion of industry from war to peace is now under way. While undeniably true that to date the progress of the change-over has not emerged from the planning period, work is now going ahead steadily on the blueprint, details are being added to the outline set up by the British report, and the planners report satisfaction at the accomplishments now being made.

The aircraft industry is negotiating a peculiar position in present plans for reconstruction and as a result of this peculiarly the industry may lag far behind other industries in the recovery from the wartime production errors for shifting to peacetime production. Already in the War Production Board orders have come out to the various industry divisions instructing them to make a study of the situation in the various industries of the Bureau report. Production controls were ordered reviewed. Contracts were ordered examined with a view to their cancellation or modification. The choices instructions were given to draw up plans for resumption of civilian production in certain lines as war needs slacken. Throughout the industry there is a feeling that as work is concerned on the development of the new planes.

**Exception**—A notable exception to the trends in the treatment, as in the case of the aircraft industry. There is no industry di-

vision for aircraft, and no decision has been reached as to who will direct reconstruction of this industry. The Aircraft Production Board, headed by Charles E. Wilson, is still concentrating on production problems and is understood to be giving most attention to the problem of industrial demobilization. Similarly, the Aircraft Resources Control Office has received no instructions to assume leadership in planning reconstruction of the industry.

One WPB official this week acknowledged that the aircraft reconversion program was "still in the air." Several different plans have been voiced, it was reported, but all dealt with limited reconversion plans and all were tentative and exploratory.

**Few Cancellations**—One factor complicating the aircraft recovery-use situation is that cancellations have been very few and there has been nothing to force attention to the subject. Another factor influencing the situation is that where aircraft facilities have become open, they were immediately returned to use on aircraft sub-contract. WPA officials prefer to sell this article on cancellations "modifications of contracts," and pointed out that where contracts were modified, the plants invariably remained in war work producing aircraft parts under sub-contract. In other words, there has

been no general release of aircraft facilities and, consequently, there has been no pressure for a reconversion program.

Aircraft Priorities Search, a unit of the Aircraft Production Board, headed by A. W. Lewis, has given some study to cases arising in certain plants where idle facilities were reported, but this unit has not undertaken to lead the reconversion program nor is it considered likely that it will do so.

**Reconversion Talk** — Another WPB official asserted that "there is considerable talking" about re-converting the aircraft industry but to date there has been little more than that. "There are many different ideas of what the final solution may be," he said, "but so far as I know no policy has taken shape."

One of the most immediate reasons for selection of a WFN unit to develop reconversion policies for the aircraft industry is that brought about by the Harbord Committee report for the "X Day" planning and handling of current considerations and the advance planning for the "X Day" on which Germany is defeated both require the closest working together of the military and civilian agencies. The Harbord report desired a decision by the "some excellent work is being done by the military," the report suggested that this information be fully available in adequate time to the civilian agencies, and warned that "the civilian agencies must organize themselves to make the information to use."

## Huge Mexico City Airport Under Way

Mexico City's new airport, which will have an area almost twice that of LaGuardia Field, is under construction. Its builders estimate capacity of 1,000 passengers, 24 tons of baggage and 20 tons of air express an hour.

A characteristic will be long main runways, necessitated by high altitude. The five main runways will range from 5,746 to 8,200 feet. Several smaller runways will supplement them.

**Hub Terminal Phased**—The new Aeropuerto Central, being built adjacent to the present Mexico City air field, will have a passenger terminal to hold 30,000 persons, freight terminals, 900-car parking area, repair shops, its own power and water systems and the usual facilities, stores, restaurants, etc.

## Over Half of Airliners Used By BOAC Are American Types

Sixty-three of total fleet of 107 are aircraft built by U. S. manufacturers; week's summary of world aviation items.

Post wartime disclosure of all equipment operated by British Overseas Airways Corp., government company, indicates that 62 out of a total of 197 planes are of American types. This fleet compares with Pan American Airways' 160 aircraft.

Forty-six of the BOAC fleet represent four-engine aircraft, and 25 of these are Short flying boats, according to a list recently released by the company.

► **Thirty Lockheeds**—The 33 Lockheed Electras and Lodestars comprise the most popular type of American aircraft used, with 30 Douglas C-47 Dakotas ranking in second place among U. S. products.

square from Pan American are still in operation, as is the well-known Consolidated model 28, the Gable, which made headlines several years ago in a South Pacific operation. BOAC operates a Consolidated 32's. The North Atlantic Laboratory which ferry military pilots are not included in the list. The company has an Air Commander, now in wide use by the worldwide Army Air Transport Command and expected to be convertible to post-war airline use.

British built types used by BOAC, in addition to the Short flying boats, include 9 Armstrong Whitworth AW-39s, 5 deHavilland DH-85 Firenegas, and 5 DH Mosquito. It is anticipated that a number of Yorks will be allocated to BOAC in coming months.

**Apology for the "York"**—The British magazine *Aeroplane* says the converted Lancaster, the *Aero York*, "is not intended as the last word in air transport," but is designed to fill a gap until bigger *Aero* ships can be produced. A company official says *Yorks* ultimately will replace *Lancasters* on the line without halting production.

The wings and tail are identical to those of the bomber, except for a third tail fin on latest versions. Maximum speed loaded is 270 mph. Those being delivered to BOAC have accommodations for 34 passengers, despite publicity referring to a maximum of 36. Rolls-Royce

Merlins are used generally, although 1400 hp Bristol Hercules XVI radials may be fitted. The radial vs. in-line controversy also is under way in Britain.

► Mexico has received deliveries of its first Flying Fortresses, according to foreign aeronautical media.

ME-323 exists in at least four versions, armed and unarmed, using either three-bladed variable pitch propellers or two-bladed unswallow of the paddle type. The transport can carry up to 130 soldiers, but has also been used to fly guns, trucks, tractors, oil, gasoline, water, wounded men, motorcycles and even horses.

• **U.S.A.A.:** British Latin-American Airways has been registered in England by five British ship companies contemplating air service to South America. Incorporators are Royal Mail Line, Blue Star Line, Pacific Steam Navigation Co., Booth Steamship Co. and Lamport and Holt Line.

## Service to Sweden

London radio has announced the Swedish air service between Great Britain and Sweden has been resumed. It was suspended in October, when an airliner was shot down by Germans.

RAF School Pools  
Allied Air Skills

Post-graduate courses conducted for experienced pilots and instructors of United Nations.

Flyers from United States forces, England and other Allied countries are attending a special school conducted in England by the RAF.

Only highly experienced flyers and instructors can become students at this little-maintained but unique school, through which the top flyers of the United Nations pool their technical knowledge and fighting experience. The school thus becomes a channel for information of operating conditions in various theaters that affect the operating efficiency and fighting ability of flying units unfamiliar with that particular theater.

• U. S. Fleet Attend—U. S. Army, Navy and Marine pilots have attended from American forces, while all units of British Empire flying elements are fitted through the British Information Service reveals. Americans attending come under reverse lend-lease, all training and maintenance during the three-month course being paid by the British.

Discussions and fight run from 8 a.m. to 10 p.m., with prior conferences to pool problems, suggestions and criticisms. The British have made all types of British plaques available for the school from treasure to Lancers.

Among the types of ships flown by the students are Spitfires, Martin B-26s, Typhoons, Mosquitos and the heavy four-engine Lancaster.

## BRIEFING

Feed Haze Co. has received a \$17,000,000 contract from the Army Air Forces for more CG-13 Waco cargo gliders, tested at Dearborn Airport.

Brewster Anatomical Corp. has taken offices in New York at 80 Broad St. The Adjutant General's office, Casualty branch, has announced that approximately 89 percent of all American women reported missing in action over Europe later turn up in German prison camps.

Col William Wenzke, public relations officer for the U.S. Army Air Forces, probably will go on overseas duty shortly.

Feed R. Neely, former director of public relations for Bell Aircraft Corp., joins Collier's staff with full time assignment to aviation. He is in Washington, at 601 14th St. N. W.

**Cherokeé Develops General Motors Corp.** is looking up to produce a new 12-cylinder Pratt & Whitney aircraft engine designed for use in powering faster fighter planes and larger maps without using all the board. The engine is a refinement of the P&W R4000. Cherokeé officials say practically no parts are interchangeable with earlier types. Production is scheduled to start in September. Production of the P&W 14-cylinder engine by Cherokeé will continue. More than 10,000 have been built.



**Planes Used By U. S. Flyers In RAF Course:** A few of the 23 aircraft used at the Euphrat Central Flying School in Britain where some of America's best flyers are taking a grueling "refresher" course are pictured on the field somewhere in Britain. The Hotspur is a British glider.

## DPC Contracts with China Aircraft For \$440,000 Plant Facilities

San Francisco factory expected to produce tail assemblies for Douglas plane; summary of week in U. S. and war agencies.

By MARY PAULINE PERRY

With announcement that Defense Plant Corp. had executed a contract with China Aircraft Corp. for \$440,000, to provide plant facilities in San Francisco, it became known in Washington that when completed the plant probably would produce tail assemblies for one of the planes being built by Douglas Aircraft Co.

There is now an indication that the output production is scheduled for export to China.

China Aircraft Corp. has been promoted by a group of Chinese Americans on the West Coast as a means of employing Chinese American workers in the war effort. Although it has the sanction of the Chinese government, it is an independent project.

**Negotiations**—For over a year, negotiations have been going on between the new company, the U. S. Government and Douglas. Douglas agreed early in the negotiations to subcontract to the corporation.

The plan is to buy some existing facilities and tool up for sub-assembly work. The majority of the workers will be Chinese with some American supervisors. A number of student Chinese have been learning aviation mechanics at Douglas.

Chief factor has been Dr. S. H. Hu, assistant manager of the factory. He has been in Washington frequently to iron out difficulties concerning the corporation. D. S. Ford is president.

**National War Labor Board's** Airframe Panel upheld unanimously the General Aircraft Corp.'s rate structure as established under its job classification plan. The Panel also approved minor increases. Local 106 UFWA-CIO raised the issue with the company.

The Board said change in plant ownership will not be a bar to continuing a union shop, stayed into by the owner. Although industry members denounced, the NWLB ordered the Frank Foundries Corp. to enter into a contract with the CAW-CIO, with the same

union shop provision under which its predecessor, Borg Warner Corp., operated.

**Materials Control**—The Operating Committee on Aircraft Materials Conservation announced that the demand for GR-M (Neoprene) is exceeding the available supply because the conversion from crude rubber in many end products has been to GR-M rather than to GR-S (Buna-S), for which technical data are not as completely developed.

It is believed that Neoprene is being used for many aircraft applications which do not require a material having the oil and weather resistance qualities of Neoprene, according to the Committee suggests that use of Buna-S or other substitutes be investigated. The Procuring Agency may give contractors their approval for substitutions.

**War Production Board** has announced a new minimum preference rating of AA-5 or better for 22 classes of industrial equipment including air filters, arc welding machines and others not previously under the order. The amended order no longer applies to conveying machinery and mechanical power transmission equipment, covered by another order.

A major revision of the WPB order limiting construction allows \$1,000 spent on airport construction without WPB authorization, against the former limitation of \$500. L. S. Cowglish, who joined the WPB as chief of the Aircraft Alloy Steel Section and later became chief of the Alloy Steel Branch, has resigned and been succeeded by S. A. Crabtree, who also continues as deputy assistant director for production.

**National Labor Relations Board** ordered Consolidated Talcott Aircraft Corp. to hold election for management carpenters and craftsmen for or against Full Cities Carpenters' District Council, AFL, and also maintenance electricians, their helpers and apprentices for or against Inrl Brotherhood of Elec-

trical Workers, Local No. 369-AFL. Electrical maintenance employees, apprentices and helpers, and laboratory electricians of Tube Barns, Inc., 35th Street plant, were ordered to vote for or against Inrl Brotherhood of Electrical Workers, Local 369-AFL.

**Case and District Order**—The Board ordered Engineering and Research Corp. completely to reconstitute Aircraft Workers Contract as representative of any employees, cease and desist from interfering with, restraining, or coercing employees in their self-organizational rights, and post compliance notices for 60 days.

In a supplemental decision with Bell Aircraft Corp., the Board amended the Feb. 5 direction of election on joint motion filed by all parties, to include aircraft in the production and maintenance unit, except the chief and assistants, captains, lieutenants and specialists.

**UAW-CIO Chooses**—General Motors Corp. Fisher Body division announced payroll actions in Dept. 18, Plant 35, elected UAW-CIO.

**War Dept.** has awarded a contract for construction of parking apron and landing field expansion at March Field, Riverside, Calif., for \$733,325.

Army Engineers have let contracts for additional buildings and improvements at air fields and bases in the approximate amount of \$497,668, including construction of temporary frame buildings at the San Bernardino Air Depot, Calif., to cost \$106,592.

## Industry's '44 Gross Put at 20 Billion

Annual gross market of the aircraft industry in the immediate post-war years will not exceed \$750,000,000, Frederick F. Robinson, vice-president of National Aviation Corp., told stockholders at their annual meeting. The gross volume that year is expected to be 30 billion.

Robinson estimated that 75 to 80 percent of the immediate post-war market would be military planes, and expressed the belief that surplus military planes would not present a problem after the war because of rapid obsolescence.

**Asset Value Up**—National Aviation Corp. said that its stockholders, had increased from \$15.42 a share to \$16.45 a share in the two-month period from Dec. 31 to Feb. 29.

## They wouldn't fly without them...



Blue baby shoes always hang on the steering column of a famous bomber, whose pilot regards them as his "holy of holies" and refuses to fly without them.



A tattered menu, souvenir of a wonderful party, went along on more than 40 missions in the jacket of a flight engineer. It even survived a water crash landing in the Southwest Pacific.



A pair of white kid gauntlets, mementoes of some extra-special girl, bring good luck to a pilot who always slips them on when he takes over the controls to make a bombing run.



ETHYL is a trade mark name

Ethyl antiknock fluid goes along with every fighting plane powered by U. S. made gasoline. It goes into every gallon of fighting grade aviation fuel—and today more Ethyl is being used in each gallon than ever before.

ETHYL CORPORATION

Chrysler Building New York City



## British Aid to U. S. Listed by Crowley

Over \$400,000,000 supplied as AAF under reverse lend-lease, FEA chief reports.

More than 400-million dollars in aircraft and airfields alone have been supplied the 8th and 9th Air Forces in Great Britain under reverse lend-lease, the House Foreign Affairs committee was told last week by Foreign Economic Administrator Leo Crowley.

Indirect contributions such as food, barracks, hospitals and hospital supplies must be added to this total, Mr. Crowley said in discussing the value of reverse lend-lease being received by this country from Great Britain, other nations of the Commonwealth and others of the United States.

**Mutual Aid Program.**—Crowley pointed out that "the air offensive against Germany and the invasion results of Europe would not have been possible on the present scale without both lend-lease and reverse lend-lease." His point of view was that the 8th and 9th Air Forces operate from huge air bases built for us by the British under reverse lend-lease at substantial cost. Our air force, he said, receives also from the British a great variety of vital equipment, supplies and services without which the American side could not be carried out.

Pointing out some of the more or less intangible benefits received from the British, Mr. Crowley revealed that "priceless information on developments in radio-location made during the blitz" had been turned over to the United States freely, and that specifications for the Merlin Hells-Boyce engine used in some of our best fighters were turned over to American manufacturers early in the war. He also referred to the jet-propulsion plane, invented by a British and now under development both by this country and Great Britain.

**Lend British Help.**—Aircraft built by the British and supplied American forces are valued at \$158,316,000 and airport construction is estimated to have cost \$295,223,940. Supplies being received by the 8th and 9th Air Forces range from several hundred planes to hundreds of thousands of small tools and parts for use in the repair and maintenance depots built for American use by the British. Armored tank units, heated flying suits and electrically heated muffs

for gunners also are provided. Crowley also revealed that auxiliary gun tanks carried by our fighters on their long-range trips over Germany are a newly designed, extremely light and easily jettisoned tank supplied by the British. Recent requisitions made by American Air Forces in Britain called for delivery of 1,267,720 square feet of steel and light alloy sheets and 233,393 rubber shock absorbers.

## New Hearing Date Set on DC-3 Load

Hearing before the Civil Aeronautics Board to consider increasing the landing weight of six DC-3's from 24,500 to 25,250 pounds and the takeoff weight for DC-3's powered with 1,200 hp engines from 25,200 to 25,500 pounds will be held Mar. 29. The hearing originally was scheduled for Mar. 15.

The Airline Pilots' Association has entered objections to the proposed increases and counter-arguments will be entered through the Air Transport Association. **Studies.**—The board probably will deal, among other things, with studies showing that the proposed weight increases would have no bearing on factors that have caused wing tip failures and that the age of the DC-3's now in commercial service has not affected strength of materials.

Army and Navy versions of the DC-3 have been permitted with increased weight limits and findings of a CAA flight engineering report generally support the increase for the commercial ships.

## National Salaries

Salaries paid the president and treasurer of National Airlines for 1948 appear exclusive in the Civil Aeronautics Board, calendar and an opinion handed down in National's real rate case.

The opinion, late the salary of G. T. Baker, president, and D. G. Bush, treasurer, at \$26,800 and \$7,000 respectively, Baker's salary in 1941 is listed as \$12,000 and the treasurer's salary before Sept. 1, 1942 at \$5,340 a year.

Concerning CAB and "grossed amounts appear accurate in view of the use of the respondents' organization and the scope of operations contemplated herein."

## Truman Notes 2 New Super Cargo Planes

Plans for production of craft, comparable to Martin 'Mars' in size, revealed in Truman report.

Disclosure that production of two new super cargo planes comparable to the Martin Mars is scheduled, is made in the recent Truman Committee report.

The report states that, "in addition to the Skymaster (Douglas C-54 modified) and the cargo version of the Liberator, production is scheduled for several other new super cargo planes. These include the Lockheed C-49 Constellation and two new super cargo planes of a size comparable to the Mars, which are to be produced, respectively, by Douglas and Boeing."

**Redesigned.**—It has been known for some time that Douglas and Boeing are preparing production of large cargo planes, but most information about these ships has been restricted. The Douglas plane is specifically designed for commercial or cargo operation.

## Study Landing Mats

Both magnesium and aluminum under experimental development.

Light metal landing mats are still under experimentation in a government laboratory. It is understood in a responsible Air Force Procurement office that Aluminum Co. of America is prepared to undertake production, but as yet there is no contractual source of supply.

Continued experimentation is to determine whether the mats should be made of aluminum or magnesium. Both metals are plentiful now but there are two points in favor of magnesium: it is substantially lighter than aluminum, which is important in transportation by air and in handling by men; aluminum will be in heavy demand for production of consumer goods as soon as manpower for that purpose can be made available.

As to a story that heat reflection from light metals used in landing mats would cause troublesome air turbulence over the belt, all authorities checked on this point have set it down as nonsense. The steel landing mat, laid in sections on newly cleared and graded flight strips, has been an outstanding auxiliary in advanced air operations.



Heavy power plants for B-24 Liberator bombers, moving toward completion on the final production line.

Starting with stock Pratt & Whitney Motors, Rohr Production Engineers perform 1000 separate manufacturing, assembling and servicing operations in building up these motor modules, complete even to cowlings!

Each operation is a step on the road to Berlin, done with a precision that contributes to the on-time, over-engineered arrival of devastating bomb loads.

Men and women at Rohr add heavily to Allied armory might. They're on the job around the clock, meeting the challenge of greater production... saving American lives by showcasing the name to "unconditional surrender."

Here War Begins—your ship is nearby.

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## COMMENTARY

## Occupation of Admiralty Islands Sets Stage for Drive on Mindanao

Converging moves on Philippines and China coast appear late 1944 possibilities as a result of giant strikes taken in Central and South Pacific.

General Douglas MacArthur's communique of Mar. 2 announced that a landing had been made in the Admiralty Islands in the northern retrograde to the Bismarck Sea, that the heights had forces within 1,200 miles of the Philippines; that the Mororo airfield had been captured, and that this marked a final stage in the great swing move pivoting on New Guinea, the zone of advance being changed from the north to the west. Ashadown of the Green Islands between Bougainville and New Ireland (Feb. 14) sealed the doors of more than 20,000 enemy troops in the Bismarck, so the occupation of the Admiralties only off some 20,000 in the Bismarck Archipelago, with the key bases of Koro, Rabaul and Gasmata neutralized.

It also cut off the remaining Japanese in northern New Guinea (Madang, Wewak and point west) from their main supply base of

Truk (600 miles N-E), making them dependent on Palau, 1,200 miles to the northwest. Thus is a base of such vital importance in the defense of the Philippines that the Japanese high command may not consider it worthwhile to make any substantial effort to bolster up the New Guinea front. Incidentally, the improvement of the Mororo airfield for use of General Kenney's land-biting bombers will bring Truk within 100 miles from the north, while General Mac's air-raiding bombers are less than 750 miles from Truk to the east, so newly captured Eniwetok (Fanned Philippines—Two years ago (Mar. 17, 1942) General MacArthur and his family, with his chief of staff, Maj. Gen. Sutherland, and air officer, Brig. Gen. H. I. George, were flown from Mindanao to Australia in a flying Fortress. It was an epoch-making and morale-boosting event. His

first statement was, "The retreat ends here. From now on we go north."

A lot of water has poured over the dam since that day, and there have been delays, disappointments, heart-aches and frustration plenty, but General MacArthur has kept his eyes on the goal, "Back to Manila, to Batavia. On to Tokyo." The way appears open at last, and in the fast-moving Pacific campaign, already ahead of schedule through the brilliant teamwork of the Navy and Seventh Air Force in the Gilberts, Marshalls and beyond, almost anything can happen.

**Highlights of the Campaign**—For more than 15 months after his arrival General MacArthur's forces, commanded by General Kenney's Fifth Air Force, were largely engaged in an offensive-defense. One turning point, the Navy playing the leading role, was the terrific battle of the Coral Sea in May 1942, in which a huge Jap invasion fleet headed for New Guinea was turned back with disastrous losses—the first air battle in history in which the fighting was entirely in the air.

Another was in the turning back of strongly outnumbering Jap land forces 32 miles from Port Moresby in September, 1942, and capture of Gona in December and Buna in January, 1943. From then until June, the slow advance up the coast continued, but at the turn of the half-year, airfields were ready and other preparations completed for a switch to the offensive. By means of brilliant airborne operations, Schimmelpenninck and Lae were neutralized and captured in a swift campaign. Smashing attacks on enemy air bases in the Wewak area from which the Jap air force in New Guinea was preparing to stage a counter-attack resulted in the destruction of 300 fighters and bombers during the last two weeks of August.

**Rabaul Neutralized**—An all-out air offensive against Rabaul began Oct. 12, and within four weeks more than 500 enemy aircraft were shot down, with another 300 probably destroyed or damaged. In addition, tens of thousands of tons of shipping were destroyed and severe damage inflicted on the harbor facilities and airfields at Rabaul.

The Thirtieth Air Force, with Navy and Marine forces, based on Manila and then on Bougainville, joined in the effort to knock out Rabaul by air, and during January and February, 700 enemy aircraft

were disposed of, the Japanese air opposition becoming more and more negligible as the weeks went by.

The day when the enemy could island-hop hundreds of fighters and bombers to his outer perimeter defenses seems to have passed.

It doubtless will be a stiff fight, however, when our combined air forces come to grips with the Jap flyers in their intermediate and inner defenses, unless our drives from various quarters can keep them off balance.

**New Moves in Prospect**—Looking at a map of the Pacific (and we should have a good one at hand for ready reference for many months to come), indicated that the Navy-7th AAF air team will make good use of strategically situated Eniwetok to "Marshallize" Waker (600 miles N-E) and Pensepe (600 miles S-W) in preparation for occupation. Possibly by going there, the combined force drive on Guam and Rapaun in the Marianas (1,200 miles west of Eniwetok) would provide a triple-threat base for operations against Luzon (1,000 miles east-west), against Formosa and the advanced goal of the China coast, and against the southern part of Japan itself. Supporting this central drive, however, the command position of the Admiralty Islands may result in speeding up the drive to clean up northern New Guinea, and eventually occupy Halmahera.

This campaign would cut off such enemy strongholds as Ambien, Timor and the Celebes, and the next jump to the north (400 miles) would be—Mindanao. On account of the supply problem, this will probably be made time in the next year or later.

On the other hand, there is now the possibility of a direct supply line to New Guinea from Pearl Harbor and through the Gilberts (New Guinea being neutralized). That would be 3,000 miles shorter than the round-about route far to the south through the New Hebrides to Australia, which has been in use since December, 1943. In any case, these converging drives on the Philippines and the China coast now appear as late 1944 possibilities, largely on account of the giant strikes recently taken in the Central and South Pacific, in all of which our air supremacy—both of carrier-based and land-based aircraft, has undoubtedly been the decisive factor.

NAVY/ART



Carrier-Based "Cubs": One of the three Piper L-4 Cubs which participated in the North African landing, it shows just before and during the island jump from the deck of the carrier Ranger, the first amphibious plane to be launched in such a manner. The role played by these planes in the campaign has just been declared by the Navy Department. The first Cub took off about 80 miles off the French North African coast.



## Piper 'Cubs' Took Off From Navy Carriers

Officials reveal role of three L-4's in artillery and reconnaissance operations.

It can now be declared that three L-4 Piper Cubs were carried across the Atlantic to act as artillery spotting and reconnaissance planes for the French North African landing in November, 1942.

Based on board the carrier Ranger, these planes were loaded on the first available landing space seized by Amphibious Force units in their invasion of Morocco. The first one took off from the deck of the carrier 80 miles from the shore, the first amphibious plane ever to be launched in such a manner.

**Landed at Airport**—The plane landed at Fes airport, just north of Casablanca, in the wake of three German planes which had thor-

oughly stirred the area. United States ground crews there, unfamiliar with a Cub in that setting, let go with the neck-and-neck. The little plane landed without a scratch.

The plane was named "Lucy" for the wife of Maj. Edward S. Gordon, an artillery officer, who flew more than 100 combat missions with the plane, although he did not pilot her off the carrier.

**Pecked Up**—An official of the Piper company said that "during Lucy's career of misadventures in and around North Africa, she became an international star of sports. A partial list of her helicopter-skilled maneuvers includes landing gear from a Messerschmitt 109 and a French bomber, instrument panel from a P-35, P-39, P-40 and an inverted half track, unseated glass from a P-40, tubing from a French fighter and tail assembly from a cracked-up jeep."

Maj. Gordon flew the plane throughout the Sicilian campaign.



## RUGGED P-38 LIMPS HOME:

Tenacious to Lockheed construction. Over 200, Lt. Col. Thomas W. Smith (pointing) was rescued by a ME-109, which lost a wing and fell in flames. The ME's wing knocked the P-38's flap half down, stripped off the right boom cooling scoop, and sheared loose the stabilizer between the booms. But Smith decided to jump, flew over enemy territory three times and popped out unhurt after a select field belly landing.

## Equipment Trust Certificates In Airline Financing Discussed

Criticism of medium for raising capital centers new attention on problem of providing funds for air carriers.

By ROGER WILCO

Future airline financing came to be renewed attention when E. Lee Talman, of TWA, in a recent address before security dealers, discouraged the use of equipment trusts as a medium of raising capital for the air carriers.

In many investment circles, equipment trusts have been regarded with both favor and suspicion. A major role in financing future plane purchases. While Talman does not close the door to this approach, he does raise a number of considerations which may well give bankers cause to pause before proceeding with this financing medium for the airlines.

**Used By FAA.**—Equipment trusts have met with considerable success in the air transport industry. Pan American Airways was the first and then for the only time to resort to true equipment trust financing among the air carriers. In January, 1939, the company sold \$1,440,000 in 4 percent equipment trust certificates to two eastern banks. These funds were applied toward purchase of the early Boeing Clippers. The America had a 34 percent equity in these planes which provided a margin of safety for the banks.

Provision was made for the serial maturity of these certificates over a five-year period. Accordingly, they were retired before maturity. The principle of this arrangement is "pay-as-you-go"—thus liquidating the obligation during the estimated "life" of the equipment. These planes continue in service despite the limited period first set for amortization purposes.

**Principle.**—The principle of trust financing among the airlines was present when American Airlines, in 1925, utilized a loan from the Reconstruction Finance Corp. to pay for its first fleet of DC-3's and which gave the line the jump

on the other carriers in this type of equipment.

The banks refused to advance any funds in the type of transaction, maintaining that the industry was too unstable to warrant the risk. The RFC, therefore, entered the picture and lent the money at 5 percent on a chattel mortgage on the planes with the line making a 50 percent equity payment. This loan was amortized on a monthly basis. A few years later, Northwest Airlines obtained a similar type loan from the RFC.

Equipment trust financing has been highly successful in the railroad field. Basically, the inherent strength of this medium is found in the indispensable character of the "rights-of-way" and passenger cars along with locomotives. A railroad might have a valuable "right-of-way," but it is worthless without the equipment to move the trains. Similarly, it may be said that the airline requires valuable "rights-of-way"—through certificates of convenience and security—would be in a hopeless position without planes with which to implement operations.

**Objections.**—The objections to equipment trust financing raised by Talman are cogent to the future extent to which this type of paper may find application in the industry. The TWA official asserts that "A bank is a defensible entity. An airplane is an aggregate of thousands of identifiable accessories and parts, which very frequently are dismantled, repaired, replaced and put together again in a totally different combination."

To this, equipment trust purportans can answer that in many instances jettisoned wheels, wheels and other integral parts of the freight car are replaced during the period covered by the trust financing. It is true, however, that the plane has

invariably more accessories replaced during its life span.

**Railroads Pace Way.**—Talman also is concerned with the problems involved in securing a proper loan in all the foreign lands through which airplanes fly. "Again, railroad experience may point the way. Railroads and air leasing firms have long been faced with the various tax laws and impositions established by various countries and districts every time a railroad car traversed the jurisdiction of the local authorities. For the most part, this condition has been successfully surmounted by the railroad industry. It is on no reason why the proper approach can not be made in aviation. This is particularly true with national governments moving in the direction of establishing well defined regulations on international flying."

While not resorting to equipment trust financing, TWA turned to bank loans to help pay for new plane acquisitions. Early in 1938, the company secured \$2,000,000 at 3 percent. Subsequently, this arrangement was revised to establish a revolving credit to provide funds for equipment purchases and other corporate purposes. The maximum amount of this credit was \$3,000,000, made available by a number of banks at an interest rate of 3 1/2 percent. This was the main feature. It is significant, however, that the airline obtained funds other than through the use of equipment certificates—the course evidently favored by Talman.

**Flow Back Earnings.**—It is difficult to see how the airlines can do without the use of equipment trusts through equity securities. The true aspect of financing projected dwarfs all existing capitalizations in the industry. The dilution of existing securities would be tremendous and it may be questionable if the market could absorb this huge amount of financing—unless of course the group was outstandingly prosperous.

In the correction, Talman makes a significant observation. Speaking of the future growth of the industry, he cautions the airlines "not to expect too much too soon as seems of profits or dividends . . . period of expansion will require the planning of the future. It may be recalled that this department has repeatedly cited this circumstance in viewing the future growth possibilities of the group."

Without extraneous financing of any kind will be a serious difficulty. There is much to be said for

equipment trust paper in the industry. Holdings in recapitalization have been able to meet the need for low interest rates. While the airlines are far removed from this condition, it stands to reason that in periods of uncertainty the group may find it much easier to resort to the same type of financing rather than try the insurance of equity securities.

## Heavy Taxes Cut Aviation Corp. Net

114 percent increase shown in 1943 report, company says war research laying foundation for peacetime expansion.

War research and development activities have laid the foundation for resumption and expansion of Aviation Corp.'s peacetime activities, stockholders are told in the annual report.

Reporting consolidated net earnings after all charges and taxes and reserve for post-war readjustment of \$3,193,687, for the fiscal year ended Nov. 30, 1943, Northern Aircraft, Aviation Corp. president,

pointed out that "we have long been a leading group in the development of all phases of civil aviation and it is our intention not only to resume our role in post-war aviation but to expand our activities as conditions warrant."

**Research.**—The annual report revealed also that the corporation has been devoting considerable study to research and preliminary planning for the post-war production of "certain types of consumer goods which would supplement and add to normal activities conducted by Aviation Corp.'s Spencer Healey Division and the American Central Manufacturing Corp."

A number of other aircraft manufacturers are known to be studying peacetime production of items other than aircraft to cushion production losses following slackening of war production demands. Aviation Corp.'s Spencer Division has been a peacetime producer of low-pressure heating unit for homes, dwellings and industrial plants, while American Central was a pre-war manufacturer of formed steel tanks and kitchen cabinets as well as a sub-contractor for a variety of metal stampings.

**Earnings.**—The 1943 earnings of \$3,193,687 were equivalent to 61 cents per share compared with 1942 revised earnings of \$3,882,975, or 68 cents per share. Earnings

in 1942 before aviation tax amounted \$7,733,084, with transportation taxes and \$7,652,118 from this figure. The 1943 earnings total included dividends from investments amounting to \$1,905,520, up \$53,368 from the 1942 investment income of \$1,852,152.

Dividends paid to stockholders of Aviation Corp. for the 1944 fiscal year were on the basis of 30 cents per share, representing two payments, each of 15 cents a share. This was five cents less per share on an annual basis than that paid in 1942.

**Taxes.**—The report states that the decline in net earnings was caused by an increase of 114 percent in taxes, an increase of 54 percent in the provision for post-war readjustment reserve, price reductions on products sold to the government, and absence of profit on sale of securities such as the \$1,118,134 in bonds and \$1,118,000 in federal taxes in 1943 amounted to \$3,393,590—\$142 a share—compared with \$3,882,975, or 68 cents a share in 1942.

Aggregate dollar value of deliveries was \$2,500,000 by the corporation and its associated companies amounted to more than \$1,118,000 during the year, a 73 percent increase over the 1942 volume of \$649,500,000.

**Payroll.**—A total of 132,608 were on the payrolls of the companies, and one unit—Northern Aircraft Products—was staffed entirely by women except in supervisory, training and engineering.

Earnings, the report said, do not reflect the corporation's equity in the undistributed earnings of associated companies, equivalent in 1943 to \$1,044,000 per share. These included, and the extent of Aviation Corp.'s holdings are Consolidated Value, 20 percent of common stock, New York Shipbuilding Corp., 51 percent of equity stock, and American Central, 52 1/2, 40 percent of common stock.

**Other Holdings.**—Other companies in which Aviation Corp. has substantial investments are American Airlines, Inc., 30 percent of common stock, subject to a trust agreement under the Civil Aeronautics Act of 1938 which provides that the stock cannot be voted, Pan American Airways Corp. 2 1/2 percent of common and Northern Field Inc., 20 percent of common.

Despite setbacks in some subsidiaries, the overall backlog of Aviation Corp.'s manufacturing units and associated companies was

more than \$3,677,999,930 Nov. 30, 1942, compared with \$3,889,889,930 at the same date in 1941. The largest was that of Consolidated Value, reported as three billion dollars.

## Ryan Earnings Gain Despite 78% Levy

Tax outlay for 1943 compares with 30 percent of gross shown in previous 12 months period.

Warlike increases in Ryan Aircraft Co. business have lessened the dollar volume of output from \$1,035,935 in 1939 to more than \$25,930,000 in 1943, but the tax "bite" has worked in exactly reverse ratio, the annual report of the company reveals. The company estimated that 76 percent of the gross profit dollar was paid in taxes last year, compared with 30 percent in 1939.

A total of \$40,000 now has been estimated for post-war adjustments.

T. Claude Ryan, president, reports total revenue for the twelve months ended Oct. 31, 1943, was \$25,357,542, an increase of \$5,177,965—or 20 percent—over the \$19,179,577 reported in the prior fiscal year.

**Earnings.**—Net profits after all charges were \$987,513 in 1943, compared with \$1,341,000 in 1942. Per share profit on the 438,183 shares outstanding was \$1.26 against \$1.27 for the previous period, while dividends paid during the year totaled 45 cents a share.

The per share earnings increase was attributed to larger volume, since the percentage of profit declared approximately one-half of one percent.

## Financial Reports

**Three Aircraft Corp.** reports net income to Oct. 31 of \$113,134, or 15 cents a share, compared with \$277,932 or 36 cents a share for the previous year. Earnings for both years are subject to adjustment for war contract renegotiation.

**Liberty Aircraft Corp.** reports net profits for the fiscal year ended Nov. 30 at \$5.07 a share, prior to retention of 100,000 shares for the taxes and other contingencies amounting to \$5,750,397. Final net was \$3.33 a share in 1942. The firm has a stock capitalization of 300,000 1/4 per common.

# The essence of dependable air transportation

Electronics is the essence of air transportation and the vacuum tube... its capabilities, its dependability and stamina are prime elements of any plan for post-war, international air transport.

Open the diary of the progress of aviation and you'll find its pages filled with the contributions of electronics. Make a list of these contributions as they relate to the future of air transportation. Then you'll see clearly how vital is the role of the vacuum tube.

Make another list this time of the names of the vacuum tubes used by the air transportation

services today. Then you'll see clearly how important is the name "Eimac" to the post-war air. The essence of Eimac tubes is performance... which includes great stamina and uniform dependability. These are the factors which have made Eimac tubes first choice of the leading electronic engineers throughout the world.

Follow the leaders to

## Get your copy of ELECTRONIC TALKERS

Keep your pages crisscrossed with informative illustrations and plans, simple language description of the fundamental principles of Electronics and its important applications. You'll find the subject worth its charge or obligation.



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414 San Antonio Ave., SAN ANTONIO, TEXAS

Representatives of: J. M. Wright, California and San Antonio City Club  
Export Agents: **FRAZER & MANNEN**  
321 Clay Street, San Francisco, California, U.S.A.

## PERSONNEL

Black Will has been elected vice-president of the Sperry Gyroscope Co., Inc., and will continue as general sales manager. Until he became general sales manager, he served Sperry as chief research director.

Edward H. Webster, former advertising and technical data director for Kellogg Aviation, Products, Boeing Aviation Corp., has been appointed Pacific Coast sales and engineering representative, with headquarters in Los Angeles.

George L. Smith, West Coast pioneer of airline traffic development and sales manager in Los Angeles for Pan American Airways, has been promoted to assistant sales manager of Pan American's Latin-American Division, with headquarters in Miami. He joined Pan American in 1929, and has been directing the company's sales organization throughout Southern California, Arizona, New Mexico, Utah, Nevada, Wyoming, Montana and Idaho.

John M. Schneider has been elected to the board of directors of McDonnell Aircraft Corp.

Russell B. Foster has been appointed national promotion director for American Airlines, Inc. with headquarters in New York. He was acting director of the CPA in New York State and previously was with Nash Motors and the Bell Telephone System.

Edwin E. Gensow, former Washington newspaperman, has been appointed editor of *Fast*, weekly publication of Fairchild Engine & Airplane Corp.

John W. Kelly has been named chief engineer of Adair Precision Products Corp., Burbank, Calif. Formerly assistant chief engineer, he now heads a staff of nearly 600 in the engineering, research and inspection departments. Kelly has been with Design-Adair, Inc. with Walbridge since 1939. He has developed several complete aircraft hydraulic circuits and other patents.



N. F. Vanderlip

N. F. Vanderlip, factory manager of the Columbus, Ohio, Curtiss-Wright plant, has been elected president of Bellanca Aircraft Corp., to succeed Col. E. H. Jones, who will devote his time to Eugene Airpark, Inc., of which he is executive vice-president. G. E. Robinson has become a member of the board of Bellanca.

Charles A. Adams has become acting personnel director of Fairchild Aircraft, following the resignation of Carl Wilson, who is now with the National City Bank of New York. Ralph Buchanan of the Employment Division in the downtown office took over Adams' duties in the Personnel Department at the plant.



## NEW UNITED AIR LINES OFFICERS:

Curtis Barkley (left) who has been elected controller of United Air Lines and Carroll H. Blomberg (right), auditor at a board of directors' meeting. The new officers, according to United, were elected in view of the company's growth and the increasing complexity of its activities.

George R. Croshaw, chief assistant at Interline Aircraft and Engineering Corp.'s Wichita plant, has been promoted to plant manager succeeding R. L. Holen, recently made vice-president. He was formerly with Boeing and Tullis.

Least Col. Robert D. Moore, USMC, has been detached from duty in the Aviation Division, Marine Corps headquarters.

William J. Ryan has been elected treasurer of Changes and Growth, Air Lines of a recent board of directors' meeting. Ryan, whose headquarters will be in Memphis, was formerly with Howard Aircraft Co., of St. Charles, Ill., where he was finance



William J. Ryan

manager. He succeeds G. O. Burge, leaving treasurer over the resignation of John A. Newmy. Burge has resigned and returned to the West Coast. Thomas M. Miller, assistant to Burge, has been named staff accountant.



# Trail Blazing in the Skies

## PIONEERING NEW METHODS



### HOW GOODYEAR AIRCRAFT CORPORATION SERVES THE AIRCRAFT INDUSTRY

1. By constructing sub-assemblies to manufacturers' specifications.
2. By designing parts for all types of airplanes.
3. By re-engineering parts for mass production.
4. By building complete airplanes and airships.
5. By extending the facilities of Goodyear Research to aid the solution of any design or engineering problem.

Goodyear

Research Laboratory



**FASTER STRETCH-BENDING OF AIRCRAFT PARTS** is made possible by the **AERO-STRETCHER**, a new development of the Goodyear Aircraft Corporation. This machine forms strips, sections and bent-up sections of any cross-sectional configuration into smooth contours of predetermined shape with minimum time and labor. It leaves no wrinkles, eliminates costly handwork. Bends are set permanently; springback is negligible, resulting in practically 100% uniformity. Parts of extremely small size are readily formed and contours up to 360° are possible. It's a major contribution to aircraft mass production.

## BUILDING PROVEN AIRCRAFT



**THE WORLD'S LARGEST NON-RIGID AIRSHIP** — the Navy's new **MA-1** — is a product of Goodyear's thirty years of pioneering in aeronautics. Long experience and practice in the improvement of aircraft design and construction methods have enabled Goodyear Aircraft to produce large numbers of patrol airships for the wartime emergency. And the record of Goodyear-built airships in safeguarding convoys without a single loss from submarine attacks attests the effectiveness of the airship, while their intricate operations attest the soundness of Goodyear construction.

Let's all  
back the attack  
with **WAR  
BONDS**



Charles Brown, Jr. of London has been elected a director of Air Express International Agency, Inc., which serves Pan American Airways, TWA and other airlines and shipping interests as clearing agents, and is general agent for Royal Dutch Airlines at Miami. Latham has recently acquired an interest in the organization.

R. L. Breck has been appointed assistant to the general manager of Sikorsky Aircraft Division of United Aircraft Corp. He was formerly supervisor of customer relations and assistant manager, Spare Parts Sales, for Pratt & Whitney Aircraft Division at Hartford. In his new position he will act as liaison for the division between the engineering department and the various spare parts procurement sections of the military services to expedite spare parts and other orders and maintain delivery schedules.



Don Deane, first Transcontinental and Western Air, Inc. airlines traffic employee in Chicago to return from Army service after honorable discharge has been promoted to traffic representative from reservations representative. His headquarters will be at 27 S. La Salle Street, Chicago, Illinois.

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#### BRAZILIAN INSPECTS FAIRCHILD PLANT

Featured in front of a Ranger-powered Fairchild F-26 monoplane at Montgomery, Md., airport, noted the main assembly plant of Fairchild Aircraft Division, are: (left to right) A. R. Stoecker, Washington representative of Fairchild, Carlos R. C. Martins, chief of press relations of the Brazilian Ministry of Aeronautics; Carl Anderson, vice-president of Wright-Biddle School of Aviation who is opening a Brazilian branch, and C. B. F. Macdonell, editor of The Register, Fairchild monthly, and author of The Helicopters Are Coming.



#### AIR EXPRESS QUIZ!

Looking over the thousands of entries in the nationwide Air Express Quiz contest for Railway Express Agency employees are: (seated) C. J. Jump and R. G. McLain, (standing) R. R. Buckner and R. S. Hampshire, all air express officials. The contest was held during January and February and War Bond winners will be selected shortly.

Comdr. Edwin B. Sanders, USN, has reported for duty in the Military Requirements Division of the Navy's Bureau of Aeronautics.

Comdr. John S. Wray, USN (aviator) has reported for duty in the Planning Division under the Deputy Chief of Naval Operations for Air.

Paul A. Sowers has been assigned management of the Washington National Airport in charge of administration. Before joining CNA in 1961, Sowers was administrative officer for the Maritime Labor Board. He will assist Harvey Law, manager of the port.

Personal changes at Chicago and Southern Air Lines include W. C. Babin, general air cargo manager at Chicago who will be transferred to the general office at Memphis. W. G. Gishen, superintendent of stations, succeeds E. Shuman of Eastern Air Lines as chairman of the Express Traffic Committee "Marty" Kinsman, traffic representative in Chicago, replaces Parker Radwin as inventory manager. Miss Bechtel has joined the Red Cross Field Service. Hale Smith has been named assistant to R. Todd Quashnick, general manager at the Memphis modification base where he was formerly personnel manager.

W. Angus Crocker, assistant auditor of miscellaneous accounts for the Canadian Pacific Railway Co., has been named assistant to the vice-president of Canadian Pacific Air Lines, Ltd.

George Holden has been appointed manager of the Plymouth-Plymouth divisions of U. S. Plymouth Corp.

Food Opacide, Radio-Royce aircraft engine assemblies at the Packard Motor Car Co., was recently called to Washington for national recognition for outstanding "production soldier."



Opacide leads Packard production workers in total suggestions accepted by the plant's Management-Labor Committee. Six of his 18 ideas in use at the plant have also been included in the combat zone repair kit used by technicians in servicing Radio-Royce engines.

Changes at Fairchild Aircraft division's Hagerman plant include creation of the Quality Control Department under direction of Paul Hart, formerly Production Planning manager. C. P. Mink, former general factory manager, upon return from temporary assignment in Experimental, becomes assistant works manager. A new division, production engineering, is created under John Young with D. Walker in charge of Manufacturing Engineering, and D. Hogg in charge of Tool Engineering. E. L. Buckner becomes head of Manufacturing Division, while continuing with the title of general factory superintendent. In the Production Planning Division E. H. Wood becomes production planning manager and C. J. McInnes as assistant production planning manager.

## "Another Martin First!"

# Martin-Developed Flooring Saves Precious Pounds in Planes



A NEW plastic flooring, which will permit airlines to carry hundreds of pounds more payload, is the latest in the parade of developments coming from Martin Laboratories. Through a licensing agreement with The Glenn L. Martin Company, this lightweight plastic flooring is now being manufactured by the Pacific Division of the St. Regis Paper Co.

#### TOUGH LIGHTWEIGHT

Made from laminated phenolic sheet reinforced with aluminum alloy strips, this new flooring weighs approximately 15 lbs. per sq. ft. less than other types of flooring of equal strength and carrying capacity. To equal the strength of this product weighing 385 lbs. per sq. ft., it would be necessary to use a plywood flooring weighing 115 lbs. per sq. ft., or a corrugated metal flooring weighing 118 lbs. per sq. ft.—nearly half again as much.

#### ECONOMICS

Since the flooring area of a modern 24-passenger airliner is approximately 1700 sq. ft., this represents a weight savings of 140 lbs. Translated into terms of passengers and cargo, this weight saving, over the life of the plane, adds up to the sort of figures that no parent airline operator can afford to ignore.

#### OTHER USES

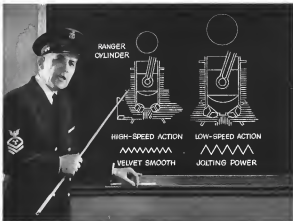
In addition, this new plastic is ideal for curbs, benches and table-tops. Either smooth or rough finish to prevent slipping, and in varying thicknesses.

Now saving precious weight in Martin-built war planes, this flooring development promises great things for the future, not only in commercial aviation, but throughout all industry. Close upon Martin research is blazing the trail to commercial

NEW GLASS L. MARTIN COMPANY, BOSTON—5, 100, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260, 265, 270, 275, 280, 285, 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, 360, 365, 370, 375, 380, 385, 390, 395, 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660, 665, 670, 675, 680, 685, 690, 695, 700, 705, 710, 715, 720, 725, 730, 735, 740, 745, 750, 755, 760, 765, 770, 775, 780, 785, 790, 795, 800, 805, 810, 815, 820, 825, 830, 835, 840, 845, 850, 855, 860, 865, 870, 875, 880, 885, 890, 895, 900, 905, 910, 915, 920, 925, 930, 935, 940, 945, 950, 955, 960, 965, 970, 975, 980, 985, 990, 995, 1000.



Deane is lighter, Martin plastic flooring is strong, rigid, and a thin sheet supports a full weight without bending or slipping.





## High Speed Means Smooth Power

Fairchild engineers have created a truly high-speed aircraft engine in the Ranger twelve (SC-770-C-2).

Ranger cylinders deliver more power for their size and weight than do the cylinders of other engines in Ranger's power class.

Each piston delivers more than 1,500 power strokes a minute at take-off—a total for the twelve cylinders of over 18,000 impelling drives every sixty seconds.

They all add up to the link of 550 horses delivered to the reduction gears that spin the propeller. The

explosion in a Ranger produces power that's softer-smooth—like this: ; instead of jolting—like this: .

This high-speed power production is possible because of the Ranger's design—design that incorporates the principle of dynamic balance in the engine, through an ingenious system of vibration dampers.

Ranger engineers pack light, smooth power into the sleek lines of the Ranger Twelve—another instance of how they apply the "touch of tomorrow in the planes of today."

**RANGER** AIRCRAFT ENGINES  
Division of Fairchild Engine and Airplane Corporation • Farmingdale, Long Island

## AIRCRAFT PRODUCTION

### Reports of Huge Aircraft Profits Show Net Before Renegotiation

Erroneous picture of situation given by statements citing "enormous" income but failing to point out substantial amounts to be refunded, Truman report reveals

Recent reports of profits made by the aircraft industry have failed to point out that these figures preceded contract renegotiation, after which there were substantial reductions and that in many cases annual financial reports have been prepared before renegotiation and, as announced, are subject to change on that basis.

In view of the difficulties attendant upon the education of administrators of renegotiation and contractors alike in the purposes, principles and procedures of this new method of price control, the results of the first full year of renegotiation, in the opinion of the Truman Committee, "are extremely gratifying."

**Pre-War Profits Shown**—The Truman Committee prepared a schedule showing relative profits during the pre-war years through 1943 of 100 American corporations which have the largest volume of war business, including a number of aircraft companies. This sched-

ule shows the effect upon such profits of the excess profits tax and the impact of the existing renegotiation or reporting law.

It shows, as the committee points out, how gross and exorbitant profits may result, and have resulted, from increasing volumes of war production, no matter what the excess profits tax rate is and no matter how honest, patriotic, and sincere are the intentions of the war producer and taxpayer.

**Examples Cited**—Of these 100 corporations, only five have been found wholly free of excessive profits in 1943. The committee goes on to cite specific examples, without mentioning names, and shows that in each case, renegotiation substantially reduced the profits originally reported. This phase of the report is sometimes overlooked.

Similar tabulations were made of 46 companies whose 1942 sales were below those of the 100 previously mentioned, and the profits picture

was reported as equally excessive and that equally striking comparisons might be made of hundreds of smaller corporations.

**Profit Motive**—"And in saying that," the Truman report added, "the committee does not wish to be understood as condoning or blaming these corporations in any way for doing the jobs they have done in order to earn these excessive profits."

We do not charge them with any impropriety nor do we say that there is anything scandalous in the fact that such profits were earned. Indeed, we believe a great many of these corporations are entitled to the gratitude of the people for doing an efficient and essential job in war production and, with the aid of renegotiation to bring their profits into line after the facts are known, they may well expect to recoup the sacrifice they deserve, while still being amply paid for the job they have done."

The report adds significantly that disclosure of postwar profits would be the surest cause for destruction of the very freedom of post-war business opportunity for which those who object to renegotiation say they are contending.

### Burden Approved

Senate Commerce Committee approved last week the nomination of William A. C. Burden as Assistant Secretary of Commerce. Senate confirmation was expected soon thereafter. Burden has been special assistant to Secretary Jones.



ASSEMBLY OF BRITISH 'WELLINGTONS':

The unusual construction used in British Wellington bombers is shown in these newest pictures of the assembly of the four-engine heavy bomber. U.S. four-engine bombers and the newer British Lancaster use



a semi-monocoque construction. Its advantages of the single-bulk structure lie in extraordinary strength with little weight. The skin can be pinned by fire without damage.

BUY U. S. WAR BONDS AND STAMPS

## Parts Plants Map

### Post-War Program

Manufacturers study plans to keep 3,500 aerospace factories in operation.

Post-war perpetuation of the business of 3,500 West Coast aircraft parts plants, representing a plant investment of nearly \$600,000,000, has become a major objective of Aircraft Parts Manufacturers Association, Los Angeles.

Immediate study of reconstruction possibilities has been pledged by recently elected APMA officers: T. T. Anden, president of Graydon Metal Control, Ltd., president; G. L. Thomas, president of Hord Chrono Engineering Co., vice-president; R. B. Riley, vice-president of New Plastic Corp., secretary, and H. C. Thomas, president of Clarke Aero-Hydrodynamics Co., treasurer.

**352,000 Employees**—The parts plants now employ 352,000 workers, and of the Coast's 3,500 plants, the majority of them, 2,300, are in Southern California. Los Angeles industrial area claims 3,500 of the total.

Squaring APMA is the prospect of contract reductions, and the conviction that Los Angeles' War Manpower Commission designation as a No. 1 critical labor shortage area will prevent local issuance of new contracts.

**Small Plant Progress**—APMA's interest in coming out with a tangible offering to the small plants, as stimulated by the fact

## St. Louis Cutback

St. Louis Aircraft Division, one of the old line aviation companies, will be out of aircraft production.

The firm, a division of St. Louis Car Co., has been producing two versions of a Fairchild primary trainer, the open cockpit PT-23, with a 135 hp engine, and the PT-24, with a 180 hp engine. Contracts are being canceled, however, with other trainer orders, in line with the Army's concentration on combat aircraft.

that an estimated 66 percent of the most than half-billion-dollar plant investment represents the private investment of money borrowed from private and governmental lending agencies.

C. C. Coddling, APMA general manager, would like to see withdrawal of the Los Angeles "No. 1 critical area" designation, believing the action will bring to the small plants additional contracts to carry them through the period of reconstruction studies.

**Unemployment Claims Increase**—Coddling cites the increase of his state's unemployment compensation claims from 17,126 last September to 24,425 in December for the Southern California area to make the point that "This exodus of labor in war industries hardly is compatible with a 'critical shortage of labor.'" He predicts that, within 60 days, Association plans

will be releasing more workers through "barometer" than they replace by new employment.

H. B. Harrell, WMC State Manpower Director for Southern California, doubts that there will be any revision of the Los Angeles "No. 1" designation. His figures showed that at the end of February there was an actual shortage of 39,000 workers in the Los Angeles area, the bulk of the shortage being in Los Angeles' major industries other than aircraft.

## NACA Issues Call For Plane Workers

Expanded aeronautical research work expected to swell staff from 5,000 to 6,500.

National Advisory Committee for Aeronautics has broadened a call for engineers, instrument makers, mechanical, electrical, and electronic, and engine mechanics to carry on the NACA's augmented aviation research program.

Hundreds of openings are also available for women computerists, draftsmen, and stenographers. The NACA staff now is approximately 5,000, with expectation that the figure may go up to 6,500.

**Ward Work Week**—"People with the needed qualifications who want to do something really effective to help the country at a time of war must hope to find work of more vital importance to the nation," John W. Victory, NACA secretary, said last week.

Applicants should write to the NACA laboratory nearest to them: Langley Memorial Aeronautical Laboratory, Langley Field, Va.; T. M. Butler, personnel officer; Ames Aeronautical Laboratory, Moffett Field, Calif.; A. B. Freeman, personnel officer; Aircraft Engine Research Laboratory, Cleveland; E. C. Bragg, personnel officer.

## P & W Fellowships

Forty fellowships valued at a total of \$45,000 have been offered to Michigan State College women for special engineering training in the coming year by Pratt & Whitney Aircraft Division of United Aircraft. Courses will include such subjects as mathematics, engineering drawing, physics, chemistry, mechanical laboratory, industrial management and materials laboratory.

## Allies Get 28,000

### Lend-Lease Planes

More than \$1,600,000,000 worth of aircraft engines and parts also sent, Crowley reports.

Important part played by the aircraft industry in providing Lend-Lease aid to the Allies is pointed up as the disclosures show nearly 38,000 airplanes were sent from the United States to Allied air forces between passage of the act Mar. 11, 1941, and last Jan. 1. In addition, more than \$1,600,000,000 worth of aircraft engines and parts were sent from the United States during the same period, it was disclosed by Leo T. Crowley, Foreign Economic Administration.

**15 Percent Combat Types**—About 75 percent of the planes sent to the United States have been combat types, the rest trainer and transport planes. Crowley's report disclosed that we have sent 8,800 four-engine, two-engine and single-engine bomber types, and 18,000 single-engine and two-engine fighter planes to theaters of war in every part of the world. Of the planes shipped to the Allies, over 4,000 were naval planes.

Shipping down these figures, between March 1941 and January, 1942, a total of 7,300 planes went to the Soviet Union, 4,000 to Allied forces in the Pacific and Far East theaters, and more than 18,000 to all other combat and training areas abroad.

**Charles E. Wilson**, chairman of the Aircraft Production Board, in announcing the February production, commended the aircraft industry particularly on the quickness in meeting or exceeding schedules in the way its aircraft plants met or exceeded their schedules, indicating sound scheduling and excellent achievement.

**Armored companies** to the Pacific Coast set a new high in February with output of 35,480,000 pounds, exclusive of parts, exceeding by 277,000 pounds the record January figure.

It was regarded as especially significant because of the increased production of heavy bombers in West Coast plants. A total of 2,369 planes were shipped to the West Coast during February, according to Bing Gen Donald P. Shan, far more than the previous month.

**February Records**—Present production for February was again ahead of schedule as the industry continued to set new output records, particularly in most-model types.

Greatest acceleration was in four-engine types, continuing emphasis where need is greatest. This group—fighters, bombers and cargo planes—formed 64 percent of the February output of 38,000 of the February output of 38,000.

**Rate of output per day** was 204—a new high, previous record being 203.

**Weight of airplanes produced** increased four per cent over the record January figure. The increase was from 30,300,000 to 32,000,000 pounds.

**Pacific Airmotive**—The Pacific Airmotive, one of aviation's oldest and largest maintenance and supply organizations, now a division of Airplane Manufacturing and Supply Corp., Glendale, Calif., has established a branch at Kansas City.

W. E. Becher, formerly vice-president in charge of the supply division of Missouri Aviation, a manager of the Kansas City division, which will be headquarters for distribution activities as well as engine and accessories overhaul station. A service base also is being established on the Kansas City Municipal airport to handle field service.

## Crowley, Foreign Economic Administration

**150,000 Planes Produced**—Since March, 1941, the United States aircraft industry has produced more than 148,000 airplanes, of which about 118,000 have been returned for our own use. The accomplishment of the industry is emphasized by the fact that, while our own forces have been built, we have been able at the same time to send such great numbers of planes and engines and parts to the Allies to supplement their own production.

Of the planes sent from this country since Mar. 11, 1941, more than 100,000 were single-engine and two-engine fighters, 7,000 were paid for in cash, principally by Britain, Crowley reported. The British Commonwealth, he added, has bought and paid for more than 9,000 planes produced in the United States since the beginning of hostilities in Europe in September, 1939.

**15 Percent Combat Types**—About 75 percent of the planes sent to the United States have been combat types, the rest trainer and transport planes. Crowley's report disclosed that we have sent 8,800 four-engine, two-engine and single-engine bomber types, and 18,000 single-engine and two-engine fighter planes to theaters of war in every part of the world. Of the planes shipped to the Allies, over 4,000 were naval planes.

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## FLEETWINGS PRESS:

Most recent addition to Fleetwings aircraft shop is this huge hydraulic rubber press that packs a pressure capacity of 2,500 tons and implements production about 10 percent over the previously used press.

## L. A. Chamber Opens Post-War Survey

The Los Angeles Chamber of Commerce, keenly aware of the sharp economic impact which may follow cancellations of warplane contracts in an area saturated with these contracts, is launching a comprehensive survey on an attempt to find answers to national problems that will ease the local situation.

Classification of questions affecting the post-war air transport industry will be attempted by a reconstituted transportation committee.

**Program**—Glen Eastburn, newly appointed chairman of the committee, which now endorses the Aviation Committee be formally headed, made the following announcement to Aviation News.

"We are preparing a survey of a lot of old questions and ones not yet settled which will affect domestic and foreign air transportation in its relation to commerce generally, other carriers, and national defense."

"Our purpose is to bring all interested issues under one heading for study, and it is our intention to try to suggest answers to these questions."



**Flaming West Coast Reconstruction**—Aircraft Parts Manufacturers Association officials, who have underwritten a study of post-war planning designed to keep in operation 2,500 Western warplane aircraft parts plants. Left to right are T. T. Anden, APMA president; G. W. Strother, executive committee member, and Frederick C. Crawford, joint president of National Association of Manufacturers, who recently addressed APMA.



## BOWSER SERV-A-PLANE Triples speed of fueling planes



Following the installation of a Bowser Serv-A-Plane at the Municipal Airport in Fort Wayne, airport officials stated, "We're now able to fuel these planes in the time it used to take to fuel just one."

Compact, entirely self-contained, cleanly built, easily installed, simple to operate... Serv-A-Plane is the right installation for medium and smaller airports, or for fueling smaller planes.

For greater capacity requirements, there is a wide range of Bowser above-ground and under-ground fueling equipment, up to the high-speed systems fitted at major airports which deliver as much as 4,000 g. p. m. These are also clean, mobile, portable and continuous types in different sizes to meet virtually every possible need.

Whatever the type or size of Bowser Aviation Fueling System, it is designed to deliver only **DRY, CLEAN, SAFE FUEL.**

Bowser, Inc., Fort Wayne 5, Indiana

Serv-A-Plane is a Complete Airport Service Station Entirely Self-contained—Includes power pump, meter, the famous Bowser Nozzle Meter, air release, automatic, centrifugal water separator, hose reel, etc., as well as storage space for lubricants, small tools, record book, fire extinguisher and other items.

**ACCURATE MEASUREMENT**—With Nozzle Meter, the vehicle's fuel used, volume and meter, every drop of fuel must be measured and recorded before it is dispensed.

**COMPACT, PORTABLE, EASY TO INSTALL**—A space-conserving, Serv-

A-Plane measures only 55 x 21 inches at the base. The steel cabinet and hood, welded, cleaned line frame are sturdy and rigid. All operating parts, of selected metals, are precision made and fit. An easily installed as a gasoline pump, connect the supply line from the storage tank, and the electrical line... and it's ready to operate.

**SIMPLE TO OPERATE**—Flip the switch to start the motor-operated pump... pull out the hose... dispense the measured amount the motor-driven hose retracts... stop the motor.

**CLEAN, DRY, SAFE FUEL**—A fine-mesh bronze strainer, built into the air line, removes all dirt and foreign particles. The Bowser Centrifugal Water Separator, incorporated in airport fueling systems, removes line water.



BY  
WAR BOND

AMERICA'S FOREMOST BUILDERS OF  
AVIATION FUELING EQUIPMENT

## New Plane Types Nearing Production

Truman report reveals revision of models, medium bomber can build; heavier aircraft assessed.

Both the Army and the Navy shortly will be receiving new types of planes that will increase the striking power of the air arms tremendously, the Truman Committee reports.

One new type specifically revealed in the report was the Navy's new F1F, which will be the first carrier-based two-engine fighter. It has been developed by Grumman, designer of the very successful Wildcat and Hellcat fighters now in use by the Navy. With the Chance Vought F4U Corsair, they have constituted the Navy's carrier fighters. There have been reports that an improved version of the Corsair is on the way.

**Medium Bomber as Key Out**—The Truman Committee also confirms the belief that the medium bomber as such is on its way out, with the statement that production of the Mitchell B-25 will be limited after this year as well as reaffirming the fact that production of the Novadur B-40 will be discontinued.

Production of the Marauder will be halted after this year, although Glenn L. Martin Co. is still producing the plane and it appeared unlikely that the output would actually stop before next year. The Marauder was the subject of pointed criticism in a previous Truman report, but it continued to defy its critics as its combat performance. **Mitchell to Be Curtailed**—Output of North American's B-25 Mitchell medium bombers will be limited after this year, the report said, and production facilities and workers thereby released are expected to be required for other important aircraft work at both the Martin and North American plants.

The committee ascribes this to increasing emphasis on long-range heavy bombers and mentions a new Douglas attack bomber considered to be greatly superior even to the A-26, which has been used with great success for a variety of purposes.

**New Heavy Bombers**—In addition to the Boeing B-29 Superfortress, the Truman committee mentions "several other types of heavy multi-engine bombers on which work is progressing but as to which it is believed that the tactical details



### RYAN'S NEW FINAL ASSEMBLY:

First time which Ryan Aeronautical has received permission to release showing actual production under way in its recently completed final assembly building is the foreground is the final assembly of wing panels and in the background are production jigs and specialized equipment Ryan has developed.

should not be set forth in a public report."

The Bell Aircraft P-39 reportedly is coming out in a greatly improved version, while other Army fighter production is centering around the P-47 Thunderbolt, the P-51 Mustang, and the two-engine P-48 Lightning.

The Navy also will begin receiving a greatly improved version of the land-based patrol bomber designated PV-1 and built by Lockheed. This plane is an alternate development of the Ventura, first built for the British.

**New Douglas Model**—Also scheduled for the Navy is a radically new Douglas plane designated as a BTD, which will replace the Douglas Dauntless, which in turn was kept in production until the Curtiss SB2C Helldiver got into quantity production. The BTD designation indicates that this plane will be used interchangeably as a dive bomber and a torpedo bomber.

## Chevrolet Record

Production of 16,000,000 pounds of aluminum aircraft forgings, ranging from engine parts to propeller blades was reported for 1943 by Chevrolet Division of General Motors, which also turned out 2,000,000 pounds of magnesium castings in its single foundry, to supply the division's large scale Pratt & Whitney aircraft engine program.

**Expansion**—M. E. Coyle, Chevrolet general manager and vice-president of General Motors, pointed out that the company was introduced to light metals only 18 months ago at the request of the Army Air Forces and gradually has expanded the aluminum forging facilities to become the second largest producer of these vital aircraft construction elements.

In 1944, Coyle said, Chevrolet produced 2,800,000 pounds of these forgings, a tenfold increase in one year.

## Improved 'Warhawk' Now in Production

A new and vastly improved P-40 Warhawk is now in production at Curtiss-Wright's Buffalo plant, according to Russell E. Wright, vice-president of the airplane division.

Existence of the new craft has been known in the industry, but there have been few details available. Wright reports the ship is a far superior plane and that it has increased fire power, longer range and an improved Allison liquid-cooled engine.

**1,600-Mile Range**—He revealed that the new model carries three 30 caliber machine guns in each wing and can carry a wide variety of bomb loads. Wright reported the speed at more than 350 mph, a ceiling of about 30,000 feet and a range of approximately 1,600 miles.



## CAB's Morgantown Decision Revives Local Service Question

Vice-Chairman Warner dissenting, urging deferment of decision and opposing piecemeal disposition of applications till problem of feeder transport policy has been settled.

By MERLIN MICKEL

Civil Aeronautics Board, over protest from its vice chairman, has given Transcontinental & Western Air permission to stop at Morgantown, W. Va., on AM 41 in a decision bearing on the question of local and feeder service.

The three-to-one opinion by Chairman Pease and Members Ryan and Lee noted the question whether the local service problem warranted deferment of TWA's application or restriction of authorization. The majority found, however, that inclusion of Morgantown as an intermediate point between Wheeling and Washington would not preclude justification of additional service "to meet the needs for purely local travel." Member Branch did not participate.

**Warner Dissents**—Vice-Chairman Warner, in his dissent, urged delay. Until further Board consideration of the entire question of local air transport service, he said, "it is unreasonable to suppose that any one point should not be disposed of piecemeal by permanent and irreversible action to add to through routes some cities which are not of very large population, unless some

very special reason for taking such action appears in particular cases." The TWA application, he added, did not seem to require emergency action.

Warner went on to cite the need for determination in such cases whether local or through transportation is called for. Where the major need is for transportation to nearby points, he said, addition of such a point as Morgantown to a transcontinental route will result in one of two things. Either the through carrier will be made "a purveyor of local service as well," with special schedules, or the community will be penalized by limitation in schedules planned to serve through travelers, sometimes striking it at movement hours, and often on a "skip-stop" basis so there actually is no transportation between airports bearing comparison on the same line.

**Air Travel Limited**—To the majority point that additional service might be postponed later, the vice-chairman replied that a limit exists to the amount of air transportation a community can support

"To attempt to divide the total amount of air travel that Morgantown would be likely to produce in the near future between the major carrier [Transcontinental & Western] and another major carrier, and a new local operation," he continued, "would be likely to speed the business so slowly as to make it unwarranting for any of the enterprises concerned."

PCA serves Morgantown on a one-round-trip schedule under temporary authorization until Wheeling Airport is available. All American Aviation also serves the city on its pickup run between Pittsburgh and Huntington, W. Va. The majority opinion looks to the added services, which may be started when the national defense permits, to develop "a substantial volume of traffic."

**Deferment Asked**—Public counsel Samuel S. B. Hays, conceding that Morgantown application was an internal part of TWA's plan to serve points adjacent to its routes, had urged that action be deferred until conclusion of the Board's local service hearing. Hays said, however, that the Board's decision, if organized but not yet operating had opportunity to present their case. He also suggested that the authority, if granted, be on a temporary basis, but no such restriction was placed by the Board.

## Route Application Cites Air Mail Use

Athens, Ohio, increase local factor in All American's request for authority to make pickup.

By WILLIAM G. KEY

Volume of airmail that might be expected from the nation's smaller cities through awakened public interest is indicated in the difference in airmail mail shown in the Athens, Ohio, exchange laws of Athens in 1946 and 1944.

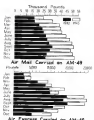
The daily average increase from 15 percent to 255 percent in the four years was revealed in connection with an application of All American Aviation Inc., which would make Athens an intermediate station point on the All American run from Pittsburgh to Washington, D. C. Athens, which has a population of approximately 7,500, is the seat of Ohio University and according to Bureau of Census Thomas A. Jenkins, in whose district Athens is situated, mail dispatched "has always been out of proportion

to its size." There is little industry in the city.

**Reconsideration Asked**—The increase in the daily average even for airmail there has led Second Assistant Postmaster General Smith W. Perkins to request reconsideration of the Civil Aeronautics Board's 1941 denial of service to the city. All American's application to the CAB followed.

All American suggests a tentative design for a combination pickup and passenger ship, a two-engine, high-wing monoplane with a 100-180 mile cruising speed range but with maneuverability and complete control at 40 miles per hour.

**Place Specifications**—Apparently



**Pickup Increases**—These charts by All American Aviation show how air mail and air express carried as the company's airmail routes increased in 1943 over 1942.

offered as food for thought) for plane manufacturers, the tentative design specifications provide for considerable landing gear, operating characteristics permitting landing and take-off from runways not exceeding 2,500 feet in length—such as those at Athens—and landings with cross-winds of up to 20 mph and taxiing speeds of from 300 to 350 miles.

Capacity and payload deemed possible by Helmer B. Bailey, president of All American, call for ten or twelve passengers, with additional payload of 1,500 pounds. 30 square feet for installation of the pickup unit, or for cargo, and additional cargo space of at least 120 cubic feet. Supplemental information suggests that All American is considering single pilot operation.



**Suggested Pickup-Passenger Combination:** All American Aviation submits this new design of a combination passenger and mail-express pickup plane as a possible future development in the field.

## Amendments Filed On 2 Applications

United Airlines and Northwest seek alternate routes.

Two airlines have filed amendments to applications pending before the Civil Aeronautics Board recently, while a third asked an amendment of its certificate.

United requested an alternate route between Cleveland and Montreal, with Toronto and Ottawa as intermediate points. The original application (docket 1217) listed Erie, Buffalo, Rochester and Ottawa as intermediate stops. Northwest amended its original application (docket 1247) for service between Chicago and Miami, Alaska, to include three routes between Chicago and Anchorage, via various intermediate points.

**Busair Adds Change**—Busair asked to include Ottumwa, Iowa, as intermediate stop on AM 9 between Kansas City, Mo., andoline, Ill. (docket 1239). Included in the new applications was one by Van Meter, Schroeder & Co. of Pennsylvania, for scheduled air transportation of mail and express by conventional type aircraft between Miami, N. D., and Minneapolis, Minn., and Duluth, Minn., and Devils Lake, N. D., and Sioux Falls, S. D., via various intermediate points in Minnesota, North and South Dakota.

Charles E. Bentley of Leland, Minn., asked a permanent certificate for scheduled transportation of

mail, passengers, and parcels by conventional type aircraft over two circle routes out of Tampa, Fla.

**Certificate Asked**—Atlantic Coast Airlines, Inc., of Raleigh, N. C., filed for a permanent certificate for scheduled and contract transportation of persons, property and mail by conventional type aircraft over two routes within the state, utilizing Sanford, Washington, and Wilmington as terminals.

Buffalo Aeronautical Corp., Buffalo, proposes scheduled transportation of persons, property, and mail in conventional type aircraft in local, feeder and pickup service, and asked a permanent and/or temporary certificate. Terminals would include Buffalo, Newark, Pittsburgh, and Williamsport, Pa., with intermediate points centered through New York, Pennsylvania, northern New Jersey, and eastern Ohio.

**Lehigh Aeronauts Files**—Proposed local, feeder, and pickup service over five circle routes, with conventional type aircraft for scheduled transport of persons, property and mail, Lehigh Aeronauts Co., of Allentown, Pa., has filed applications for a permanent and/or temporary certificate of convenience and necessity. The company would use Allentown as terminals and serve various intermediate points in Pennsylvania and New Jersey.

Caribbean Atlantic Airlines, Inc., of San Juan, P. R., filed an amendment to their application (docket 1153) to request authorization of scheduled air transportation of persons, mail, and property between



**Studying Pickup-Passenger Possibilities:** All American Aviation carried two passengers recently over one of its scheduled pickup routes to study the possibility of combination airmail and express pickup with passenger service. The passengers were James J. Strogg, Associated Press news column editor, and Edward E. Stetter, Jr., head of Civil Aeronautics Board's information section. Picture shows, left to right, Eugene R. Strogg, operations manager; Harry R. Strogg, vice-president; Strogg; Stetter; and Capt. Thomas E. Ryan, pilot.

San Juan and the terminals New York, Washington, New Orleans, Kansas, Jamaica, and Port of Spain, Trinidad. Intermediate points listed are Ciudad Trujillo, D. R., Port au Prince, Haiti, St. Martin, Antigua, and St. Lucia.

## Florida Lists Ports For Post-War Use

Florida's new State Aviation Committee will study military air fields in the state as one of its first steps toward development of a post-war air program. Information will be sought on number and possibilities of maintenance by local operation. Data also will be gathered on availability of skilled aviation labor after the war.

The Committee was organized at Tallahassee, with Rep. Godwin M. Nelson of DeLand as chairman and V. J. Obermaier, Jr., of Jacksonville as secretary. It was appointed by Gov. Spessard L. Holland.

Membership—Other members at the initial session were Sen. Wallace R. Stegall of Ocala, Arthur Curry of Quincy, Charles M. Moon of Mount, of Eastern Air Lines, and MacDonald Bryan of Jacksonville, of National Airlines.

After hearing Governor Holland state that air activities must be of statewide interest, the Committee appointed W. B. Haggerty of Tampa a member.



### NORTHWEST TO USE "SPOTLIGHT PAINTING"

Northwest Airlines has had such success with "spotlight painting" of machinery in its Liberator bomber modification project at St. Paul airport that it plans to adopt the scheme in oil shops along its system. Picture shows engine lathes in JVA Turin Cities shop where various colored paints are used to identify moving parts and electric controls.

## Mail Pay Revised On National Route

Decision is first recent action granting more than 0.3 mill per pound mile.

In the first recent mail pay decision granting a rate of more than 0.3 mill per pound mile, the Civil Aeronautics Board has ordered a scaled rate of pay for National Airlines, away that carrier's routes from Jacksonville to Miami and from Jacksonville to New Orleans, which even National slightly more than the 0.3 mill most issue. In 11 previous decisions, the rate has been set at 0.3 mill.

The new rate of pay from Jan. 1, 1943, to Oct. 31, 1944, was set at 11.41 cents per surplus mile, while on and after Nov. 1, 1944, for any month during which the average daily designated mileage does not exceed 6,622 miles, National will receive a base rate of 8.50 cents per surplus mile for a base percentage of 300 pounds of mail. Excess percentage above the 300 pounds will be paid for at the 0.3 mill rate.

**Reduction**—Attorneys for National said they had not had time to estimate the full effect of the decision, but the CAB decision estimated the January-October rate represents a reduction of approximately \$155,990 for the period, compared with the old rate, and

that the estimated annual reduction now in effect would be \$143,666.

The decision was the second recent one in which National has figured, the first coming when the line was authorized its operation from New York to Florida points, a decision widely interpreted as a move to strengthen a small airline by permitting it to compete with established carriers in rich traffic territories.

**Branch**—Member Harold Branch, who has dissented from the 0.3-mill rate in previous cases, did not participate in the National case. Branch has been 11.

The Board decision ordered that National's rate in each month in which the average daily designated mileage exceeds 6,622 miles bear the same relation to 9.5 cents per surplus mile and 385 pounds respectively, as 6,622 miles bears to the average daily designated mileage. Excess percentage above the adjusted base percentage in that instance also will be paid on the basis of 0.3 mill.

## TACA Stock Sought

National Aviation Corp. plans purchase of "small block."

Negotiations for purchase of a small block of TACA stock by National Aviation Corp. "are expected to go through as a matter of form" shortly, according to Frederick F. Robinson, vice-president of the corporation.

Negotiations were revealed several weeks ago, but Mr. Robinson said they had not been consummated because "we are in the midst of unwinding certain legal technicalities involving the person from whom we are buying the stock." He said he could not divulge the name of the individual, but that the interest would be small both as concerns TACA and National Aviation Corp.

National Aviation is not at the moment anticipating further purchases of interests in South American aviation because of the difficulty of getting adequate information in that field, Robinson said, adding that the TACA purchase was being made because of the recognized abilities of Lowell Verney, who developed and heads TACA, Transcontinental and Western Air recently acquired a large interest in the company. Plans then were afoot to pit more TACA stock into American hands.

## LEADERS DO THINGS FIRST

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Allison built the first aircraft engine in the world to receive official military rating of more than 1,000 horsepower.

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GENERAL  
MOTOR

# Disposal of Government Inventories

How to dispose of government surpluses when the war ends need not be an insuperable problem—if we face it promptly and intelligently. But if we do not, peacetime markets may be disrupted, government funds wasted, production discouraged, and reconversion of the whole economy to peace seriously hampered.

What we need most in order to attack the problem is estimates of how much surplus there will be, in what types of goods, and where.

At the war's end, government inventory of war goods is likely to total around 60 billion dollars. Most of this will consist of aircraft, ships, and other ordnance. Only some 15 billion dollars or less will be in food, clothing, trucks, tools, chemicals, medical supplies, transportation, engineering and communication equipment, and other goods for which there is a civilian market.

In addition, war contractors will have about 10 billion dollars of inventories, the bulk in specialized raw materials, goods in process, and finished products. Only about one-fifth of the total, or some 2 billion dollars, will be marketable or usable for civilian purposes. While the government takes over the usable inventory, the war contractors will have to build up their stocks for peacetime production, so that on balance, they will not be disposing of usable inventories in large volume.

Not even all of the usable war-end inventory will be "surplus" for sale to civilians in competition with new production. Some of it will be needed by the sizable peacetime Army and Navy we are likely to maintain, and such additional items as can be stored without serious deterioration or obsolescence will be held against possible future war emergencies. Some of it will be disposed of abroad. And up to half of it will be abroad and may be sold there or used for relief.

After allowing for these factors, the war supplies to be disposed of in our own markets probably will be less than 10 billion dollars (cost basis). While the total is not overwhelming—the equivalent of two months' retail sales—in certain lines the surplus will be several years', instead of a few months', normal supply. In particular, the volume of scrap metals available from

otherwise reusable materials will present a problem.

A great deal can be done now to reduce the size of the postwar surplus by achieving a better balance between military needs and supplies and avoiding excessive inventories of particular raw materials or finished goods. This work needs to be pushed, not only to simplify our transition to peace but also to prevent wasting productive energies during the war. Furthermore, when the war ends on one front, inventories of war material should be worked down to the reduced scale of maintaining military activity.

We must develop programs of action until we know approximately how much of each type of item it will be sold, and where and when it will be available. Wide margins of error are inevitable as long as large-scale procurement and large-scale consumption are still taking place; yet such information is essential and must be developed. Indeed, improved inventory records and estimates are badly needed for the conduct of the war as well as for managing the surplus after hostilities cease.

In decisions on the disposal of war goods inventories, the public interest must be the prime consideration. Proposals that none of these goods should be sold domestically because of competition with new production obviously are untenable. Everything that is not needed by the Armed Services or for other special purposes should be disposed of ultimately. The real problem is not whether surpluses should be sold, but rather to whom, at what price, and at what time the sale should be effected.

In the distribution of such large quantities of goods, we believe that established trade channels should be used wherever possible. Otherwise, we shall witness wide spread speculation in war goods and the widespread growth of inefficient and disruptive fly-by-night distributors. This will benefit only a few speculators and will discourage legitimate producers and distributors from making their normal commitments.

All war contractors should have the privilege of retaining those inventories for which they are willing to pay actual cost or a fair price negotiated with the gov-

ernment procurement agency. The balance of the inventories in the hands of war producers should be assembled by the government and sold in an organized manner. It is of great importance that the plants be cleared of these inventories at once so that the process of conversion to peacetime operation can proceed without further delay. To accomplish this, preparations must be made before the end of the war for speedy determination of the inventories to be moved and for a large volume of storage space to accommodate them.

The price which can be realized and the timing of sale are closely related. Certainly the best prices will not be secured if the government attempts to dispose of large supplies of material and products suddenly without regard to market conditions. Most businessmen rightly favor an early transfer of surplus inventories from government to private ownership. But, they also realize that if all the surpluses are dumped indiscriminately as they become available, many markets will be badly depressed, and the resulting low prices will bring lower production. If this depression effect becomes general, so it easily can, it will be costly to the nation in terms of jobs, income, and goods.

In industries in which production is inadequate to meet postwar demands, an immediate sale of government inventories can prevent inflated prices and preserve balanced market conditions. In cases in which the surpluses are large in relation to normal production, the disposition can be accomplished over a period of years. Generally, however, it will be best to clear the surplus as quickly as orderly sale can be accomplished rather than to leave them as a continuing threat overhanging the market. Most industries can, and should, take the disposal process in their stride without special dispensation from the government. In this connection, it should be noted that the tax provisions for carry-back of losses and excess profit credits after the war greatly increase the possibilities for speedy disposal of surplus without serious injury to producers.

There will be some industries, however, in which the surplus surplus is so large that it would practically saturate the market for years to come. The problem of these industries is further complicated by their wartime expansion of capacity many fold in excess of peacetime requirements. These lines of production are, moreover, crucial for our national defense. Aircraft and shipbuild-

ing are cases in point. Each of these situations calls for careful study and discussion by all concerned to devise means to keep alive the necessary production organizations, the research effort, and the spirit of enterprise. Insofar as possible, the individual manufacturers should work out their own solution in the conversion to peacetime markets. They can do this by taking on new lines, by increasing their production efficiency, and by developing technical improvements which make the existing inventories obsolete. But they still will need some kind of government protection or assistance while the huge surpluses are being worked off. It is most important, however, that such protection or subsidy be limited to a period of three to five years. It must not become permanent unless it is really essential for our national security.

The disposal of surplus inventories is part of the whole process of demobilization of the war effort and conversion to peace. If this process is to be accomplished with minimum dislocation and injury to our economy, it will have to be directed by a central agency which has developed adequate information service and is in position to coordinate the policies of the Armed Services and the other interested executive branches of the government. This agency should draw freely on the knowledge of businessmen in the specialized problem of marketing surpluses in each industry. It should formulate definite programs of inventory disposal for all industries in which the problem is acute; and it should make these programs public as soon as possible, so that business can plan for the future with confidence. In large measure, the success with which we make the economic transition to peace will depend on the quality of government administration in the process of industrial demobilization. We shall need better organization for the transition to peace than we had in mobilization for war if we are to avoid needless unemployment, loss of production, and frustration of business enterprise.

*James H. McGraw, Jr.*

President, McGraw-Hill Publishing Company, Inc.



Quick lift Aight with wing hoists

## Flight without Wings

There is no nose of engines, when the great, gleaming fuselage of a Boeing Flying Fortress makes its first flight. Smoothly and quietly it glides above the compact rows of partly completed bodies in the final assembly line. After the overhead cover has set it down in position, the wings, tail surfaces and landing gear will be joined to the fuselage and the big bomber will be ready for the air.

Thrilling even to the uninitiated, this scene holds a far deeper significance for the trained technical man. It typifies an entirely new development in production

engineering—a major Boeing contribution to wartime speed and efficiency.

The Boeing system emphasizes short flow, multiple-line production. It provides maximum use of every foot of plant space. It allows for flexibility in design—and to rapidly changing combat needs. And it moves out planes faster. Boeing's rate of production today is so times what it was the month before Pearl Harbor.

Boeing production engineers have proved that by completing each section of a plane separately, and bringing the sections together only at the last stages

of assembly, both space and time are saved. After a plane receives its wings, it occupies several times as much room as when it is in section. That is why even the wing of a Fortress is fully assembled and installed before the final joining of wings and fuselage.

Without such basic innovations in design, engineering and manufacture, Boeing could never have achieved the swiftly multiplied production that now distinguishes many plants. True today, it will be true of any product tomorrow... if it's 'Built by Boeing' it's bound to be good.

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## AA Tests Shipment Of Hatching Eggs

System, if successful, may be used in replenishing depleted stocks of occupied countries.

Shipment of eggs by air dates back to 1929, but American Airlines attaches new, wartime significance by helping the University of Maryland in a current experiment. Dr. Mervin A. Jull, professor of poultry husbandry, is seeking to determine effect on hatching eggs of barometric and temperature variations during flight. He has in mind, American says, the possibility of using air transportation in rehabilitation of poultry stocks in occupied countries.

**Egg Test Made**—As part of Dr. Jull's study, American last week carried 15 dozen eggs from Washington National Airport to Los Angeles. Agents made observations for Dr. Jull at scheduled stops. The same thing was done on a return trip, with the same eggs, the idea being that the 3,200-mile trip would compare with the distance to some of the countries in the rehabilitation program. The eggs were then to be placed in University hatcheries, with an equal number that had been kept there, while Dr. Jull awaits results.

Question is whether Dr. Jull will come to the same conclusion others have reached, that shipment of newly hatched chicks is more practical than eggs, if air transportation is used.

**Sent to Guatemala**—Coordinator of Inter-American Affairs reports the first North American shipment of hatching eggs left by air express for Guatemala in the fall of 1939, soon after Pan American Airways started service to Central America.

Later the shipper and the airline discovered that baby chicks weigh about half as much as the hatching eggs. Methods were worked out to send the chicks, which do not eat for 12 hours after hatching, instead of the eggs.

Millions of chicks have been shipped southward, CIAA says. Half a million went by air express last year from the United States to the other American. The rate was about 18,000 a week.

## Army Yields to CAB

Army has relinquished to Civil Aeronautics Board the duty of final passage on air service patterns and allocation of equipment for domestic airlines. As the week ended, official announcement of the step was expected momentarily.

Since the Army took over slightly more than half the planes the airlines were using early in 1942, it also has exercised authority over opening and discontinuance of schedules and has had the final say in what airlines were to receive returned planes. This has worked out largely as a superficial authority, however, since generally the recommendations by the Civil Aeronautics Board in this regard have been accepted.



**American Aids In Egg Transportation**—Yuck: American Airlines carried these eggs on a transcontinental cargo plane last week in a study of how air transportation may be used in rehabilitation of poultry flocks in occupied countries. William Christapker is the agent. Other picture, showing baby chicks about to take off by Pan American Airways Clipper for Mosals, was taken in 1939.



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the manufacture of various types of oil separators for use in the deicing equipment of airplanes has long been an important activity at Mercury... complete tooling and experienced craftsmen give considerable advantage in quality, price and meeting schedules.

## dependable deliveries

MERCURY know-how, developed over 23 years devoted exclusively to aircraft fabrication, makes this company a dependable source of supply of aircraft parts and accessories, assuring quality and delivery on schedule. aluminum fuel and oil tanks, ailerons, flaps, cabsins and similar surfaces, aircraft parts and accessories.

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Wrote or were Oliver L. Porter, President, for letters of Porter trained men who may be available to fill your own personal needs.

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offer excellent opportunities in the engine intelligence field to persons trained in aircraft or engine intelligence. Among necessary urgent requirements are the following:

Aeronautical and mechanical analytical equipment for heat rejection, fuel systems, vibration and power

Design engineers	Project engineers
Lay-out draftsmen	Engineering aides
Detail draftsmen	Sheet metal workers
Cleaners	Auto air welders
Technical illustrators	Metal workers
Test engineers	Assembly shop
(Right test)	helping
	Wood workers

To arrange for an interview, please write or wire your qualifications to Index Engineering Department, at phone 8-8811, extension 294.

**East Hartford, Connecticut**

All listing shall be done in conformity with  
the War Relocation Authority Act

Western Air Lines registered a 100 percent increase in average passenger miles for January over the same month last year. The respective totals were 1,956,758 and 1,453,783. Express pound miles were 42,154,588 in January this year, 58 percent above the same month in 1949. Express tonnage gained 38 percent.

►Trans-Canada Air Lines claims east and west non-stop trans-Atlantic records between Montreal and Great Britain. West-bound time recently was 13 hours and 18 minutes, which TCA says is 14 minutes faster than the 1981 record set by British Overseas Airways. An east-bound flight was made in January in 13 hours and 14 minutes.

4-Civil Air Patrol members may receive without charge a procedure manual for aircraft radio-telephone communications. The 16-page booklet is being made available by Electronic Specialty Co., Los Angeles, manufacturers of Ranger transmitters and receivers. The material was compiled by CAP national headquarters, and printed under direction of Capt. Fred W. Channing, Communications Officer, California Wing. The manual reproduces the CAP training directive on use of two-radio equipment.

Northwest Airlines' express poundage for January was 143,300, a figure about 78,000 pounds over January, 1943.

✶ National Airlines reports an 88.27 percent load factor for 1983, compared with 79.59 the previous year. Other increases last year over 1982: Mail pound miles, 449,215,524 compared with 375,742,799, an increase of 62.83 percent; express pound miles 181,617,131 compared with 81,724,968, or 84.52 percent; revenue passenger miles, 23,038,860 against 13,612,603, or 49.47 percent; revenue passenger, 76,173 compared with 58,152.

• T. E. Bruff, president of Dewalt



Anyway, announces incorporation of a non-profit charitable organization known as "the Branniff Foundation." The fund, "in fulfillment of a long cherished ambition," was started with the idea of furthering accumulation, but now its scope is to be more general. However, it will "engage in no activities at present except to make a study of the future course of its plans," according to the announcement.

► Traffic increases have led Trans-Canada Air Lines to install larger office space in Montreal.

✶ **Pennsylvania**—Central Airlines reports increases of 88 and 85 percent respectively in mail and express for 1943, compared with 1942. Scheduled sales flown were up 5 percent—from 84 to 95 percent—and revenue passengers were up 38 percent while passenger load factor rose 18 percent. Mail in 1943 was 4,547,526 pounds against 2,472,723 in 1942. Revenue was 4,357,935 against 2,607,271.

A program involving construction and improvement of 120 airports in Minnesota, five times the number of landing fields now designated for civilian use, is suggested in an annual report to Gov. Edward J. Thye by Leslie L. Schroeder, state secretary of transportation, who said his department's program would cost about \$80,000,000. Schroeder is looking forward to 7,000 planes flown by Minnesotans after the year 1970 by Twin City residents. The total is 2,000 less than recent estimates by Charles L. Stinson, Civil Aeronautics administrator.

■ **The American Airlines** proceeding to sell management in Latin American countries from 1982 to 1985, was the subject of a study by the International Board for Information (Globe 1985). The study will seek to determine sales strategies from Aug. 31, 1982 to Aug. 31, 1985. The information data was not in the American Airlines and was not in the International Board for Information (Globe 1985). The study will seek to determine sales strategies from Aug. 31, 1982 to Aug. 31, 1985. The information data was not in the American Airlines and was not in the International Board for Information (Globe 1985).

■ The Board changed its name to comply with the recent restructuring in name of United Air Lines Transport Corp. to United Air Lines Inc. The abbreviation was used in earlier FAA filings.

• Continued has been awarded to Intergroup in BSA's company's Kansas City-Pittsburgh Division application on AM 30 (Docket 811)

\* *Horiprepis* was double purchased to origin, once by the consignor, Mr. John Indraganathan. Details were in which an unusually heavy to expected loss. [Indraganathan has an U.S.A. Chinese, and Southern Eastern American.]

■ Following Board provisions, Eastern has begun voluntary checks between Eastern and Indianapolis on 2, 4, 6 and 8 between New

• **Whip** at the Mississippi-New York, among which meetings ended last week are also in April 17. (Dial 422 of a). The interested are (include American Society, Chicago and Indiana, Colonial Northwest PCA, Mountain TWA, and Texas).

OVER-ALL DIMENSIONS  
Cooling that, in  
whole and two parts,  
22 in. high x 24 in.  
wide x 18 in. long

★ SPACE COOLING  
★ HUMIDITY CONTROL  
★ REFRIGERATION  
*in a single unit*

When the  
the whole  
unit is  
the whole

**OVER-ALL DIMENSIONS**  
 Condensing Unit, low  
 wheels and low plate  
 37 in. high x 34 in.  
 wide x 18 in. deep

- ★ SPACE COOLING
- ★ HUMIDITY CONTROL
- ★ REFRIGERATION

*in a single unit*

Condenser Unit is placed wherever convenient while Portable Evaporator (weighing under 80 lbs.) is easily moved by one man to most effective spot to be cooled.

## WAUKESHA *portable* REFRIGERATION and AIR COOLING UNIT

Specifically developed to meet Ashtek's many needs be — space cooling — spot cooling — humidity control — refrigeration — all in one unit!

Now airplanes used by armed forces or commercial lines—any type of airplane—anywhere—may be

quickly and easily pre-cooled by the Waukesha Portable Refrigeration and Air Cooling Unit.

...In completely or semi-enclosed structures, or in the open air... substances classified as high

Because it is exceptionally built to

weight, extraordinarily compact, exceedingly mobile... automatic in operation... with a refrigeration capacity of 1 to 3 tons—Aviation can put the Weslake Unit to an almost endless number of uses.

**Chilbosne**  
**GENERATORS**  
1000 generator, 2.50 KW,  
1000-10000 KW, 220-440  
V, 50 Hz, 380 to 440 Hz.

**REFRIGERATION DIVISION WAUKESHA MOTOR COMPANY WAUKESHA WISCONSIN**  
*Longest Builders of Mobile, Engine-Driven Refrigeration and Generator Equipment*

## Air War; New Stage

THE CURIOUS, unprecedented aerial campaign of the RAF and the still-expanding U. S. Army Air Forces is dwarfing the ground-riders and usually anonymous skeptics in our war department who were whispering only a few weeks ago that airpower was on trial. There had been too much optimism about airpower's potential value, they told all who would listen.

"As stated many times, the first and foremost aim of the present air war is to knock out the German air force as an essential preliminary to a successful mass invasion of the continent," the New York Times points out.

This "first and foremost aim" has every indication of being achieved in the near future. Once it is achieved, our tremendous air strength will be given another equally vital objective, probably a concomitant of invasion.

The critics of air, if they are wise, will keep quiet. The present ferocity of the air war, because it is incomparable, took them by surprise. They should brace and gird themselves for another surprise when our armor put on their next performance. It will be incomparable too.

## New Vistas of Power

THERE IS NO PHASE of aeronautical development making such strides as aircraft power plants.

The new Rolls-Royce Griffon announced officially last week, with first installation in the Spitfire, points up the new peak reached in liquid-cooled engines. Our own Allison plants, used in combat, and announced before the war, are making excellent headway.

Aircooled engines are now in production which exceed by a substantial margin previous horsepower outputs. While specific figures showing the present state of development cannot be published, W. W. Davies, superintendent of research for United Air Lines, told a meeting in Chicago recently that in his belief engines developing 4,000 hp will be in use within five years. He contends that engine output may drop from the present 1½ pounds per horsepower to one or less.

Diesels for aircraft is a subject for debate and skepticism in responsible engineering circles. The present Guberson aircraft engine has a weight of about two pounds per horsepower, with claimed advantages of saving in fuel cost and weight, and consequent increased range. Maintenance costs are low, service life is long. It may be that diesels will be practical for long-range, cargo operations. At the moment, diesels cannot be ignored in any survey of the future.

The sensational jet propulsion plane obviously

offers the greatest opportunities for raising our speed limitations at lower costs, with improved performance. It must not be discounted. Every aeronautical engineer who has an opportunity to fly it is coming away a convert. It is probably the most important aeronautical discovery since the Wright Brothers' flight. Its possibilities are endless, its developers believe. While it is true that it may be five or ten years before we have fighters flown entirely by jet propulsion, it should not be forgotten that jet propulsion units might well be used as auxiliary power packages for conventional aircraft within a short time after the war. Operated to assist takeoffs and to step up performance in high altitudes, these units would be important aids for commercial aircraft. Those who put wide use of jet propulsion at ten years ahead appear to be on the skeptical side.

## Tell the Worker First

FLAWS in coordination between the War Department's various units devoted to boosting war workers' morale and those issuing press releases were apparent in the mechanics of announcing the termination of trainee contracts at several plants.

In a statement to its employees at Hagerstown, Fairchild Aircraft Division's management expressed the problem well:

"Most of you learned about the contract termination from the newspapers and not through company channels which had been set up. . . . This came about because the information was released to news services at the same time as the contractors were notified."

The result was that we did not have time to get the information to you before it went into print. Statements for the press from management had to be issued simultaneously with our own memoranda to supervisory personnel. Whenever possible this type of information will always be presented to all employees through the supervisory conferences rather than have it reach you first through outside sources."

General Manager Richard R. Norville lost no time in reassuring his workers that the terminations were not unexpected, that there would be no change in production rate for six more weeks and that the company would have plenty to do during and after its change-over to other Army contracts.

There will be similar terminations in coming months. The War Department can prevent consternation and confusion among employees at plants affected if it will simply take the problem into consideration before releasing such announcements to the press.

ROBERT H. WOOD



## PUTTING A CRIMP IN PRODUCTION...SPEEDED THINGS UP

Sounds impossible, doesn't it—but it's literally true. Here's why. Many of the structural members of an airplane are stamped out of lightweight metal, and then "crimped" or "bumped" in the shape of an elongated letter C.

This operation gives greatest rigidity and strength to structural members and also provides a rounded edge which prevents the fabric covered surfaces from injury which sharp edges might cause. Anything which speeds up this "crimping" operation, speeds up production.

At McDonnell, a member of our organization, has developed a "C" Flanging Machine, which, with

a wiping and rolling action, performs the second forming operation necessary to complete the C flange, in less than half the time formerly required.

In addition to saving time, the machine produces a more uniform flange free from ricks, dents, and irregularities—and saves the operator much of the fatigue which this operation formerly caused.

This development is another indication of the active interest taken by our personnel, in seeking new ways to perform their tasks better and faster. It's our most reason for McDonnell's reputation for meeting production requirements on schedule.

**McDONNELL Aircraft Corporation**

Manufacturers of PLANES • PARTS • PLASTICS • SAINT LOUIS • MEMPHIS •





## GUARDIAN ANGEL

They're on their way, deep into enemy territory—a fleet of Forts at 30,000 feet, with their guardian angels perched high above.

FW's? ME's? Zero's? Any Axis fighter that pokes its nose up at the bombers is a "sitting duck" for diving Thunderbolts. Because, at the Army's request, Republic designed and builds the famous P-47 Thunderbolt to fight higher and hit harder than any other airplane in the world.

In doing this job, Republic has solved many longstanding problems of efficient flying in the stratosphere. This knowledge will contribute much to America's leadership in world air transport after the war—when giant airliners will travel faster and more economically—because they'll fly high where the flying is best. Republic Aviation Corporation, Farmingdale, L. I., New York, and Evansville, Ind.



FARMINGDALE  
DIVISION

**REPUBLIC  
AVIATION  
CORPORATION**

SPECIALISTS IN HIGH-SPEED AIRCRAFT  
MAKERS OF THE

*Thunderbolt*